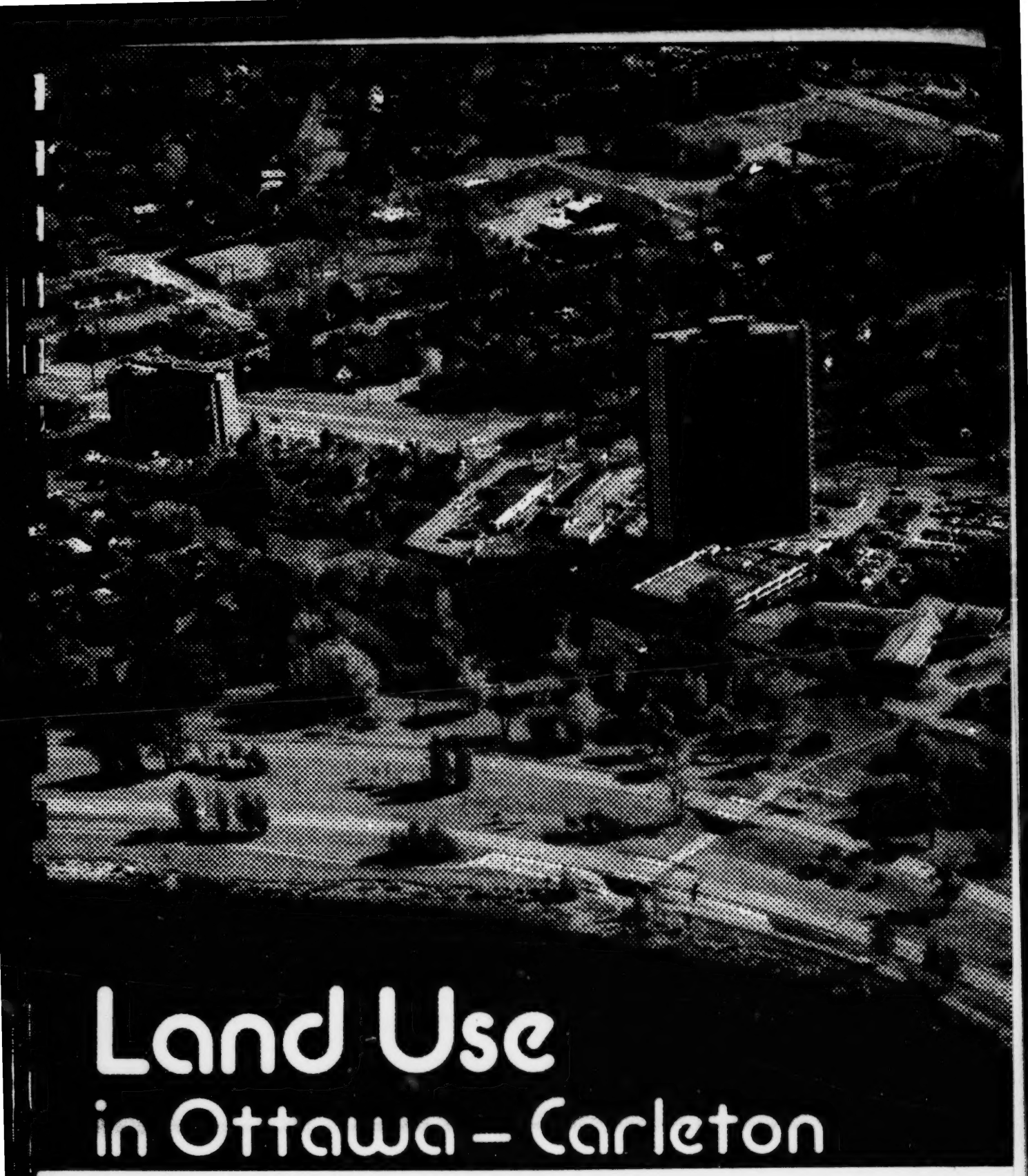

Land Use in Ottawa – Carleton

The Regional Municipality of Ottawa-Carleton
Planning Department
Aug., 1982

Regional Municipality
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Service
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04 Aug 82

REPORT TO PLANNING COMMITTEE

LAND USE IN OTTAWA-CARLETON

In the summer of 1980, a land use survey of the Region was undertaken by the Regional Planning Department. The results of this survey, which were subsequently up-dated by the staff of area municipalities in 1981 are being used as follows:

1. As up-to-date land use data source for use by area municipalities, agencies and the public.

2. As a basis for a review of changing land use patterns.

3. As a basis for a review of changing rates of urban land consumption.

The information will be used initially to review Part 2 of the Official Plan which is currently underway. As part of this review, this report investigates trends in the rate of urban land consumption between 1961 and 1981; attempts to verify the validity of the assumptions used in the early 1970's in determining the future urban land requirements of the Region and points out the planning implications of the increasing rate of urban land consumption and decreasing urban density.

Highlights of the Report

1. The consumption of land for urban purposes has been greater than expected. This is not a problem at this time, since the rate of total population growth is slower. However, if current trends continue, certain objectives in the Region Official Plan will not be achieved. For example: there will not be sufficient urban land to accommodate the ultimate urban population of 900,000. Also, the level of population inside the outer limit of the greenbelt may not reach 625,000 as anticipated in the Regional Official Plan.

- For each increase of 1,000 population between 1961 and 1971, 27.8 hectares of urban lands were consumed. This rate of consumption more than doubled to 64.8 hectares between 1971 and 1981.

- The gross urban density in the Region fell from 37 persons per hectare in 1961 to 31 persons per hectare in 1981.

2. All urban land use densities (measured in terms of persons per hectare) decreased between 1961 and 1981, with the exception of open space-recreation. This means there was less open space per person in 1981 than 1961.

3. Between 1961 and 1981, the average household size has decreased while the density of housing units has increased slightly. Therefore, the decline in residential density (expressed in persons per residential hectare) is due to the decline in household size.

4. It is important to review continuously the rate of urban land consumption in relation to population growth in order to be able to identify changing trends and ensure sufficient land for future urban purposes is designated in the Official Plan.

J.M. Wright
Planning Commissioner

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Urban Land Use Map 1981 — Inside Back Cover
Rural Land Use Map 1981 — Inside Back Cover

1981 REGIONAL LAND USE REPORT

1. Purposes of the 1981 Regional Land Use Report

The purposes of the 1981 Regional Land Use Report are as follows:

- to present the results of the 1981[1] regional land use survey;
- to provide current land use information for the review of the Regional Official Plan and other planning studies;
- to provide current land use information to other regional departments, area municipalities, agencies and the public;
- to undertake an historical analysis of the consumption of urban land between 1961 and 1981;
- to set up a base to facilitate a continuous review of changing land use patterns in the Region.

2. Scope and Methodology

The scope and methodology of the land use survey are contained in Appendix 1 of this report.

3. Rate of Urbanization in Ottawa-Carleton

Table 1 shows the rate of urbanization in Ottawa-Carleton. In 1961, over 95.6% of the Region was in the rural area. Land used for urban purposes occupied 4.4% of total land area. The urbanized area was concentrated in the City of Ottawa, City of Vanier and Village of Rockcliffe Park. Although there were some developments in the (then) Township of Nepean, mostly in City View, the (then) Township of Gloucester had very little urban development.

During the 1960s and the beginning of the 1970s, urban development began to occur primarily in the suburbs. Some lands in the Queenswood area in the East Urban Community and the Glen Cairn and Beaverbrook areas in the West Urban Communities were developed towards the end of the decade. In 1971, 94% of the land in the Region was rural while 6% was urbanized.

By 1981, the urbanized area in the Region had grown to 7.4% of the total land area. Major urban growth occurred in South Ottawa, various communities in the City of Gloucester and City of Nepean, the South Urban Community (Barrhaven), the East Urban Community (Orleans-Queenswood) and West Urban Community (Kanata - Glen Cairn). The proportion of rural land dropped to 92.6%.

The spatial extent of urban development in Ottawa-Carleton in the period 1961 to 1981 is shown in a generalized form in Figure 1.

4. Trends in Urban Land Use, 1961-1981

The areas of different urban land use types in 1981, by municipality are shown in Table 2. Urban areas shown in this table

---

[1] Although actual field checks were carried out in the summer of 1980, the land use data were up-dated and confirmed by staff of the area municipalities in the spring of 1981.

URBAN DEVELOPMENT IN OTTAWA-CARLETON
1961-1981

FIGURE 1

TABLE 1

Distribution of Rural and Urbanized Lands[1] in RMOC, 1961, 1971, 1981 (in hectares)

	1961		1971		1981	
	ha.	%	ha.	%	ha.	%
Urbanized Land	12,100	4.4	16,500	6.0	20,500	7.4
Rural Land	265,900	95.6	261,500	94.0	257,500	92.4
Total	278,000	100	278,000	100	278,000	100

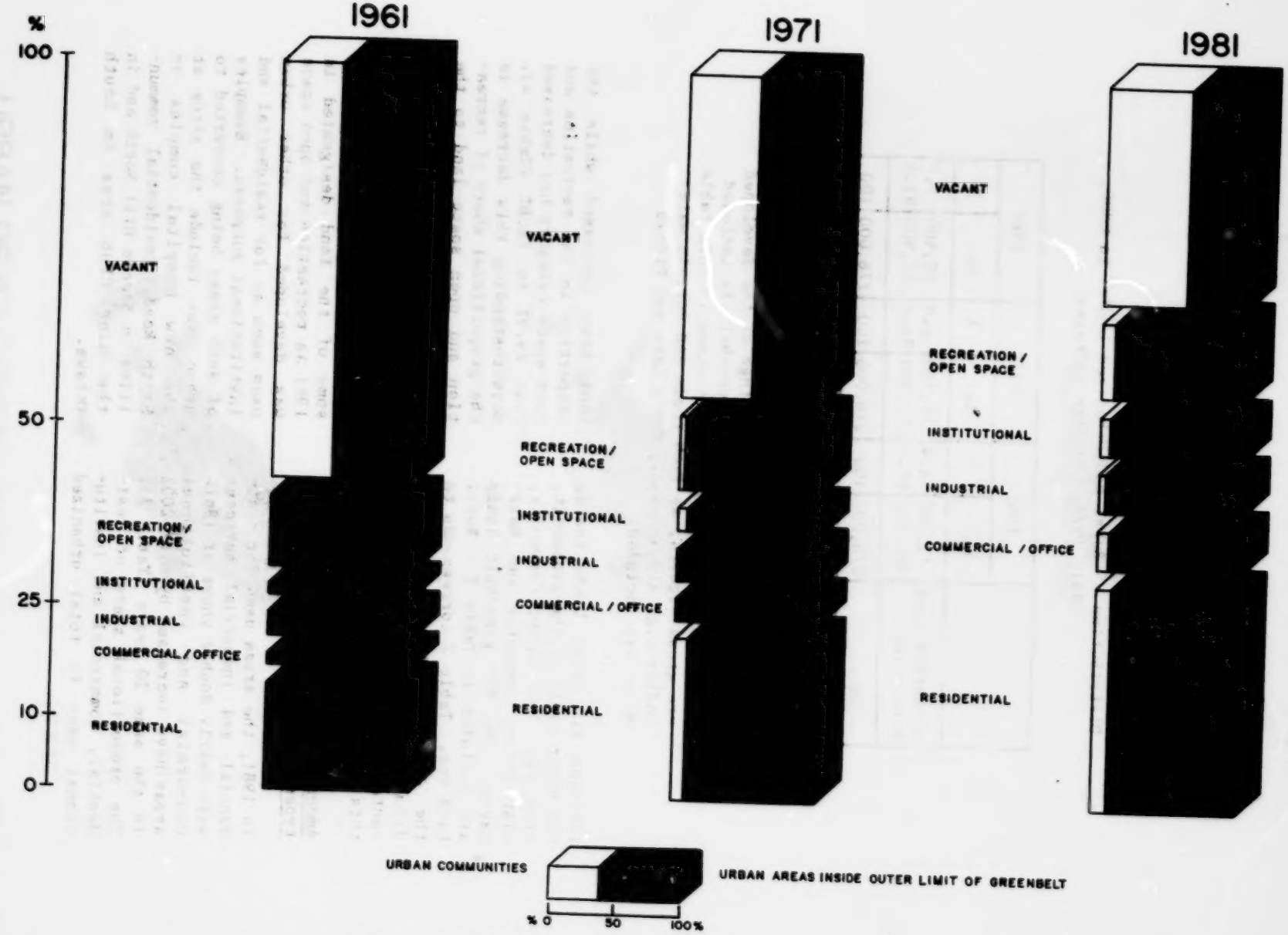
[1]Urbanized land in this table includes all urbanized areas inside the outer limit of the greenbelt and the developed lands in the urban communitites. Rural and idle lands at the fringe of the developed areas are not included. NCC Greenbelt is included in the rural land. The figures shown in this table are gross figures, as such roads and certain water bodies e.g. Rideau canal, Dow's Lake and Rideau River are included.

includes all urban lands inside the outer limit of the greenbelt, plus the West Urban Community, East Urban Community and Barrhaven. The NCC greenbelt lands are included in Table 7 - Rural Land Use. Table 2 corresponds to the area covered by the 1981 Urban Land Use map which is contained in the back pocket of this report.

Amount and proportion of land use types

In 1981, the areas used for residential and industrial purposes were nearly double those of 1961. Commercial and institutional areas have increased by over 200% in the same 20 years (Table 3). The proportional share of residential, commercial and institutional uses to total urbanized land have increased while the proportion in the recreation and open space category has decreased from 29.9% to 18.8% (Table 4). Notwithstanding this decrease in the proportional share of recreation and open space land to the total urbanized land, there was a net increase of approximately 404 ha. between 1961 and 1981 (Table 3) in this category. During the same period however, some of the land designated in 1961 as recreation and open space was developed for other urban uses such as for residential and institutional purposes. Examples of such areas being converted to urban uses include the sites at the new hospital complex on Smyth Road, residential communities in Beacon Hill North and in the Hunt Club area in South Ottawa.

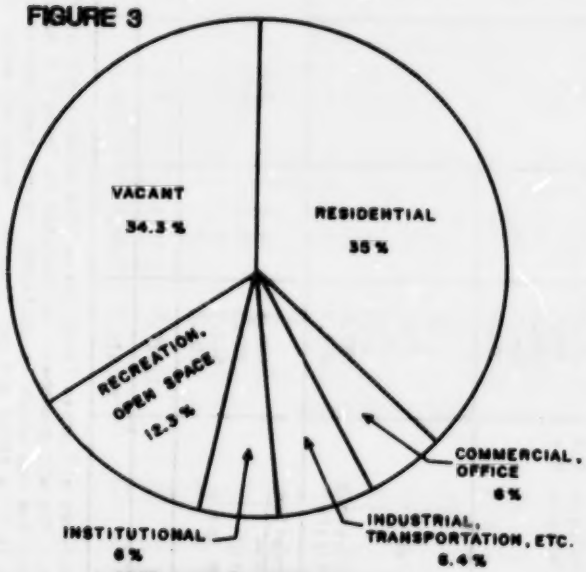
FIGURE 2



URBAN LAND USE CHANGE 1961–1981

Figure 2 illustrates (i) the changing proportion of land use by type between 1961 and 1981; and (ii) the increased proportion of development in the urban communities. In Figure 2, the volume of the column represents the area of land designated for urban purposes in 1981. As shown in Figure 2, the proportion of residential, commercial, institutional land uses to total urban land has increased, the proportion of vacant land has decreased while the proportion of recreation/open space and industrial uses remain fairly constant. In 1961, all of the developed areas were inside the outer limit of the greenbelt. By 1971, residential, institutional and recreation/open space uses began to occur in the urban communities. By 1981, the urban communities had grown in size and the proportion of each land use type in the urban communities increased. The majority of vacant land left in the Region is in the urban communities.

FIGURE 3



LAND USE DISTRIBUTION
URBAN AREA, R.M.O.C., 1981

Rate of Urban Land Consumption

A total of 3,100 ha of urban land was consumed between 1961 and 1971, an average of 310 ha per year while 3,776 ha were consumed between 1971 and 1981, an average of 378 ha per year. This increased rate of urban land consumption is more significant when it is related to the rate of population growth in the Region. During the first 10 years, total urban population in the Region increased by 35% and the amount of urbanized land increased by 39%. But during the second period, while the amount of urbanized land increased by 34%, urban population increased by only 13.5%. (Tables 3 and 5).

In numeric terms, with each increase of 1,000 population, 27.8 ha and 64.8 ha of urban land were added during the two periods respectively. If only residential lands are considered, a similar trend also occurred. With every increase of 1,000 population, 17.7 ha of residential lands were developed between 1961 and 1971. This ratio increased to 35.3 ha per 1,000 new population between 1971 and 1981.

These trends have resulted in a reduction in gross urban density in the Region between 1961 and 1981. The gross urban density in the Region fell from 37 persons per ha in 1961 to 36 persons per ha in 1971 and further to 31 persons per ha in 1981 (Table 6).

TABLE 2

AREA OF LAND USE OF URBAN AREA[1], RMOC, 1981 (In hectares[2])

	OTTAWA	VANIER	ROCKCLIFFE	NEPEAN	GLOUCESTER	KANATA	CUMBERLAND	TOTAL
Residential								7,906.3
Low Density	3,112.4	87.2	114.6	1,379.7	944.3	274.3	147.3	6,059.8
Medium Density	391.9	18.0	-	174.4	286.6	49.6	14.3	934.8
High Density	809.4	18.0	-	44.6	32.1	.9	-	905.0
Mobile Home Park	-	-	-	2.1	-	-	4.6	6.7
Institutional								1,380.9
Church	146.8	14.7	-	37.1	18.3	.9	-	217.8
Community Centre	2.4	.4	-	.9	-	2.4	-	6.1
Day Care/Pre School	3.1	.6	-	-	-	1.3	-	5.0
Elem. School	209.6	7.0	3.4	58.4	67.6	21.2	8.4	375.6
High School	121.9	6.8	4.9	43.3	39.1	18.7	-	234.7
Univ./College/Voc.	135.5		-	22.1	-	-	-	157.6
Hosp, Nursing Home	136.7	1.5	-	1.2	7.9	-	-	147.3
Other Inst.	208.1	5.0	.3	10.5	11.9	1.0	-	236.8
Commercial								1,327.9
Shop Centre -9290sq.m. GLA	41.5	5.0	-	27.7	27.8	4.3	-	106.3
Shop Centre +9290sq.m. GLA	56.1	-	-	34.3	21.9	18.3	9.7	140.3
Sales Outlet	186.4	4.0	-	61.3	54.7	9.4	.7	316.5
Other Commerc.	156.0	9.5	-	51.4	53.9	2.9	1.8	275.5
Office	403.5	2.3	.2	22.3	11.9	49.1		489.3
Industrial								1,445.4
Manufacturing	85.7	.7	-	75.2	22.7	40.7	-	225.0
Warehouse/Storage	23.2	12.0	-	80.7	10.0	8.4	-	134.3
Construction	26.3	.3	-	10.2	21.4	1.2	-	59.4
Extractive	45.9	-	-	-	24.6	-	-	70.5
Multiple Use Industrial	187.8	15.8	-	57.8	28.6	16.4	.2	306.6
Trans, Comm. Utility	487.7	1.2	-	133.6	18.8	8.3		649.6
Open Space/Recreation								2,791.5
Active Recreation	462.5	11.2	2.7	135.4	97.7	70.1	.1	779.7
Passive Recreation	751.3	3.3	26.8	69.3	92.9	58.8	21.5	1,023.9
Maintained Open Space	612.7	-	.5	14.1	154.8	2.2	-	784.3
Agricultural	203.6	-	-		-	-	-	203.6
Vacant	1,567.9	10.5	4.7	1,014.2	2,047.6	2,043.9	1,087.0	7,775.8
TOTAL	10,575.7	235.0	158.1	3,562.0	4,097.1	2,704.3	1,295.6	22,627.8

[1]Urban Area includes all urban lands inside the outer limit of the greenbelt plus West Urban Community, East Urban Community and Barrhaven. The NCC greenbelt is included in Table 7 - Rural Land Use. This Table corresponds to the area covered by 1981 Urban Land Use map which is contained in the back pocket of this report.

[2]Figures shown in this table are net figures. Roads and water bodies are excluded.

TABLE 3

Urban Land Use by type, RMOC, 1961, 1971, 1981 (in hectares)

	1961[1]	1971[2]	1981[3]
Residential	3,876	5,852	7,906
Commercial	387	613	1,331
Industrial	820	1,164	1,445
Institutional	507	709	1,379
Open Space/Recreation	2,387	2,739	2,791
Vacant	14,650	11,550	7,775
Total	22,627[4]	22,627[4]	22,627[4]

Sources of Information

[1]City of Ottawa Official Plan Amendment No.19.
[2]Technical Report No. 6 Land Use, RMOC Planning Department 1972 and Aerial Photographs of RMOC, 1971.
[3]1981 Regional Land Use Survey.
[4]Total Urban Area include all lands designated for urban uses on Schedule 'B' of the Regional Official Plan, as adopted by Regional Council in 1981.

All the above statistics show that the Region has accelerated its per capita rate of urban land consumption during the last 20 years.

In other words, the urban population in the Region is using up more land per person in 1981 than in 1961. Reasons are given below.

Urban Land Use Density by Type

Table 6 illustrates the trends of urban density by type of land use, in the Region between 1961 and 1981. All urban land use densities (measured in terms of persons per hectare) decreased between 1961 and 1981, with the exception of recreation and open space.

Residential. Since residential use has always been the predominant urban land use in the Region (Table 4), any change in residential has a significant impact on the overall urban density. The net residential density has decreased from 82 persons per ha in 1961 to 74 persons per ha in 1971 and 62 persons per ha in 1981 (Table 6).

TABLE 4

Percentage of Land Use Categories to Total Developed Lands[1]

	1961	1971	1981
Residential	48.6	52.8	53.2
Commercial	4.8	5.5	9.0
Industrial	10.3	10.5	9.7
Institutional	6.4	6.4	9.3
Open Space/Recreation	29.9	24.7	18.8
	100%	100%	100%

[1]Vacant undeveloped lands are not included.

Two possible factors can contribute to a decline in residential density. They are declining household size (persons per household) and declining residential development density (occupied dwelling units per hectare). Urban household size has declined from 3.8 in 1961 to 3.4 1971 and 2.6 in 1981. This decline occured both in the urban areas inside the greenbelt and in new urban communities. On the other hand, development density has slightly increased. The number of occupied dwelling units or households in the urban area has increased from 21.4 households per hectare of residential land in 1961 to 21.7 in 1971 and 25.6 in 1981. One can conclude, based on the above, that the decline in urban residential density expressed in persons per hectare is completely caused by the declining household size which the Region has experienced between 1961 and 1981.

The ability to forecast future residential land requirements will depend on the ability to forecast future household sizes and housing density.

Commercial The ratio of urban population to commercial land has dramatically declined from 824 persons per hectare in 1961 to 367 persons per hectare in 1980 (Table 6)[1]. This also means that for every increase of 1,000

[1]It is recognized that in all land use categories other than residential, there are interactions between the rural population and the facilities provided in the urban areas such as hospitals and places of employment. The numbers shown in Table 6 relate only to the urban areas, and as such, they should be viewed as broad indicators to illustrate trends in the urban areas.

TABLE 5

URBAN POPULATION 1961, 1971, 1981 RMOC					
	1961	CHANGE	1971	CHANGE	1981
Inside outer limit of Greenbelt					
Ottawa	268,206	34,083	302,289	-7,126	295,163
Vanier	24,555	-2,060	22,495	-3,703	18,792
Rockcliffe	2,084	66	2,150	-281	1,869
Nepean	16,995	44,785	61,780	11,106	72,886
Gloucester	7,049	20,936	27,985	24,422	52,407
Sub-total	318,889	97,810	416,699	24,418	441,117
Urban Communities[1]					
West Urban Community	100	6,910	7,010	11,414	18,424
East Urban Community	400	5,935	6,335	14,499	20,834*
Barrhaven	0	825	825	7,876	8,701
Sub-total	500	13,670	14,170	33,789	47,959
Grand total	319,389	111,480	430,869	58,207	489,076

Source: Census of Canada, Statistics Canada, 1961, 1971 and 1981.

*The population in the East Urban Community is estimated due to the incompatibility of two census tracts boundaries with the boundary of the East Urban Community. Data on the basis of enumeration areas are unavailable at the time of printing of this report.

population, 2 ha of Commercial land were developed between 1961 and 1971, and 12 ha between 1971 and 1981. This higher per capita consumption of commercial land is the result of the type of developments associated with retail shopping and office buildings in the region in 1960s and the 1970's. Newer shopping areas and office developments outside the greater central area often provide more land for parking and landscaping. This trend is consistent with the fact that employment in the sectors of the economy using commercial and office space have been expanding more rapidly than population. While the trend to lower densities may continue, in the short term the proposed development in the central area should help to moderate the decline, eg. Rideau Centre, Metropolitan Life Building and several hotels.

TABLE 6
Net Urban Density
Persons Per Hectare by Type of Land Use RMOC, 1961, 1971 and 1981

	1961[1]	1971[2]	1981[2]
	p.p.h.	p.p.h.	p.p.h.
Residential	82	74	62
Commercial	824	680	367
Industrial	389	360	338
Institutional	628	610	354
Open Space/Recreation	133	155	175
Net Urban Density	40	39	33
Gross Urban Density[3]	37	36	31

[1]all developed lands inside outer limit of greenbelt, areas of road are excluded.
[2]all developed lands inside outer limit of greenbelt, West Urban Community, East Urban Community and Barrhaven, areas of roads are excluded.
[3]Areas of roads are included.

Industrial The ratio of urban population to the amount of developed industrial land has only slightly declined. The ratio of population to Industrial land has changed from 389 persons per hectare in 1961 to 338 persons per hectare in 1981 (Table 6). Industries have continued to move away from the inner parts of the City of Ottawa and many new industries have located in newer industrial parks elsewhere in the City of Ottawa and in the suburbs. Similar to commercial-office developments, most industrial parks provide more land for parking and landscaping.

This decline in the ratio of population to industrial land consumption is not as significant as the decline in the population to commercial land ratio since the land requirements of certain industries e.g. storage and vehicle depot remain fairly constant over time due to the nature of their activities.

In the future, there is a likelihood that the ratio of population or employment to industrial land consumption will stabilize. The prospects of industrial growth in the Region lies primarliy with activities related to high or advanced technology. These activities, although labour intensive, often are located in the suburbs, and consume more land for parking and landscaping purposes.

Institutions. Between 1971 and 1981, several new major institutions were developed and some were expanded. Examples of these include the hospital complex on Smythe Road, Queensway-Carleton Hospital and Carleton University. Between 1961 and 1971, with every increase of 1,000 urban population only 1.8 ha of institutional land were developed in the urban area. This increased dramatically to 11.5 ha per 1,000 new population during the second period.

At least for the near future, major consumption of land for institutional uses is not anticipated. Any demand for land in this type of use will primarily be extension or expansion to existing facilities with the exception of the National Gallery and the Aeronautical Museum.

Open Space - Recreation. Contrary to the trend of declining density in other land use categories, the ratio of urban population to open space - recreation has continued to increase. Between 1961 and 1981, the persons per hectare of open space - recreation land has increased from 133 p.p.ha to 175 p.p.ha. (Table 6). This reflects the fact that although the population of the urban area in the Region increased, there was no corresponding increase in any major open space in the Region.

Within the urban area, it is not anticipated that there will be any new major open space in the future.

From the above, it is clear that the rate of urban land consumption is increasing faster than the rate of urban population growth. If this trend continues, what are the implications for the future land requirements in the Region and other policies in the Regional Official Plan.

5. Regional Official Plan

Overall Land Requirement of the Region

The Regional Official Plan suggests that there is a degree of consistency in the relationship between the number of people living in an urban area and the density at which they live, the amount of land needed for specific urban uses and the total amount of land used for all urban purposes. With this in mind, the plan adopted in 1974 designates 24,000 hectares of urban land to accommodate 900,000 people who will be located in the urban area, assuming a gross urban density of 37 persons per hectare.

As mentioned previously, the gross urban density has dropped from 36 persons per hectare in 1971 to 31 persons per hectare in 1981. It is recognized that there are many social, economic and physical development factors which affect the overall urban density in the Region. Since the predominant factor influencing residential density is the declining household size and since it is forecast that the household size in the Region will decrease from 2.7 persons per

household in 1980 to 2.5 persons per household in 2001[1], it is reasonable to conclude that the urban density will continue to decline or at most stabilize at a lower level.

A recent study[2] published by the Regional Planning Department indicated that there appears to be sufficient lands currently designated for development to house the anticipated population at least until the late 1990's. The study also warned that there "are several emerging economic and demographic factors which alone or in combination could either work to accelerate or delay the need for additional lands."[3]

The consumption of land for urban purposes, on the basis of a per capita increase, has been greater than anticipated. This higher rate of land consumption is not a problem at this time because the Region has experienced a slower rate in population growth during the last 10 years[4] than was originally anticipated.

However, in the long term land designated for urban purposes will accommodate approximately 744,000 persons, if the existing urban density of 31 persons per hectare is maintained and less if the existing urban density further declines. Unless there is a reversal in the trend of declining urban density the 24,000 hectares of land designated in the Regional Official Plan for urban purposes will not be sufficient to accommodate the 900,000 urban population, as envisaged in the Regional Official Plan. Additional urban land will have to be designated sometime in the future.

Population Inside the Greenbelt

Analysis of population growth trends inside the greenbelt reveal that the level of population has not achieved the levels expected in the early 1970's when the Official Plan was developed (Table 4). The net residential density inside the greenbelt has decreased from 82 persons per hectare in 1961 to 64 persons per hectare in 1981. As explained earlier, the primary factor contributing to this phenomenon is the decline in household size. This decline in urban density inside the greenbelt may have invalidated the official plan

[1]Households in Ottawa-Carleton: Trends and Forecast" RMOC Planning Department 1981.

[2]"The Staging and Phasing of Urban Residential Lands in Ottawa-Carleton: 1980-2001", RMOC Planning Department, 1981.

[3]For example, a continued strong demand for ground-orientated low density housing in spite of a continued increase in non-family household formation may accelerate the demand for additional lands. On the other hand, a more efficient utilization of the existing neighbourhoods and housing stock through infilling and rehabilitation may delay this demand.

[4]The average annual population increase between 1961 and 1971 was 11,350 between 1971 and 1981 the growth in population decreased to 5,820 per annum.

target of approximately 625,000 persons living inside the greenbelt when the Region reaches 1 million population threshold. This will be investigated.

Transportation Implications

One of the major goals for transportation in the Regional Official Plan is to develop a safe, convenient, efficient and publicly oriented transportation system. With this in mind, the transportation system contained in the Regional Official Plan was developed based on a threshold population of 1 million persons in the planning area, of which 900,000 persons will live in the urban area. The decrease in overall urban density (persons per hectare) will result in a redistribution of ultimate population in the Region and expansion to areas currently not designated for urban uses. Depending on the rate and location of new urban development, certain adjustments to the transportation may have to take place.

If a threshold of one million is reached as invisaged in the Official Plan, the transportation system will have to service a larger area. However, it is important to recognize that transportation needs are not simply derived from population density. With declining household size and increased labour force participation, trips per unit and trip purposes will undergo change. It is therefore necessary to examine overall population levels, population distributions, demographic, labour force, economic and social factors together to determine transportation service requirements.

Since demand for transportation increases incrementally, expansion, improvement and timing of facilities can be expanded incrementally. For capital works, decisions can be made annually with the approved capital budget against regular reviews of development trends and transportation demand. For right of way protection a more comprehensive review of long term estimated demand is required. This review is an item of the current re-examination of the Official Plan.

Servicing Implications

The Regional Official Plan provides for the continuous development of water supply, and sanitary sewer systems to meet the needs of the growing population of the Region. When the facilities such as trunk, water mains and pipes are planned and constructed, substantial capital outlay is incurred to support eventual capacity requirements, in advance of ultimate need. In this respect, the servicing systems do not have a similar degree of flexibility as the transportation system. These facilities are planned assuming a certain level of population living in certain designated urban areas and a certain employment distribution pattern. Any decrease in urban density means that the same facilities will serve a lower level of population over any given area. The

TABLE 7

RURAL[1] LAND USE, RMOC, 1981 (In hectares)

LAND USE	KANATA[3]	NEPEAN[3]	GLOUCESTER[3]	CUMBERLAND[3]	WEST CARLETON	GOULBOURN	RIDEAU	OSGOODE	TOTAL
MOBILE HOME PARK	-	-	5.9	2.3	4.3	-	-	10.8	23.3
RESIDENTIAL	133.6	198.7	635.6	320.5	1,039.3	710.4	623.2	308.2	3,969.5
INSTITUTIONAL	130.8	540.4	209.9	15.8	38.5	4.7	18.5	6.8	965.4
COMMERCIAL	6.7	24.7	54.6	16.2	1.5	28.9	11.2	68.8	212.6
OFFICE	7.8	-	5.2	1.0	1.6	2.5	3.5	4.7	26.3
INDUSTRIAL	4.2	135.3	110.0	10.6	4.2	42.8	-	40.3	347.4
UTILITIES - COMMUNICATIONS	6.5	105.2	241.8	5.7	213.3	138.3	69.0	23.9	803.7
AGRICULTURE	3,290.3	12,915.9	11,898.8	20,396.8	28,800.0	15,105.0	20,622.5	27,264.1	140,293.4
WOODLAND	4,689.0	2,259.1	5,734.6	6,556.6	23,578.8	9,435.4	15,567.0	7,941.4	75,761.9
SAND & GRAVEL	-	254.8	606.6	124.0	240.9	108.7	67.2	184.8	1,587.0
QUARRIES	-	32.5	194.7	-	13.0	-	-	-	240.2
CLEARED LAND	2,541.2	1,299.4	1,949.7	1,468.9	7,355.0	1,646.9	3,572.9	1,787.2	21,621.2
MARSH/WET LAND[2]	1,596.7	389.2	1,678.8	1,385.8	5,192.9	4,895.3	7,781.4	1,722.7	24,642.8
RECREATION	19.7	88.7	268.8	19.4	250.4	202.7	365.1	63.2	1,278.0
TRANSPORTATION	-	-	1,780.0	-	420.3	4.2	1.6	-	2,206.1

1 Including NCC Greenbelt
2 Including those wet areas located in Woodland and Cleared Land
3 rural portion

current Official Plan review will include re-examination of the water and sewer services contemplated in the Plan.

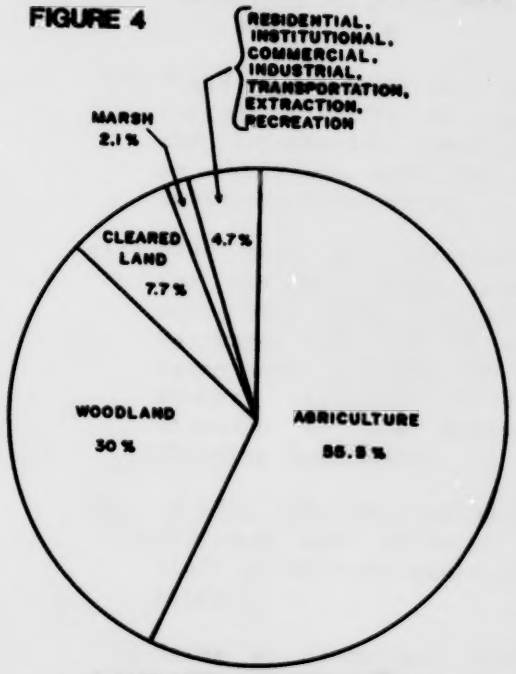
6. 1981 Rural Land Use

The map of the 1981 rural land use of the Region is contained in the back pocket of the report. Land use maps of the villages are in Section 7 of the report.

Due to the lack of rural land use information in the 1960s period and the incompatability of the 1971 rural land use information, the Planning Department was unable to undertake an analysis of rural land use change in the Region.

Generally speaking, it appears only minor net changes in land use has occurred in the rural area between 1971 and 1981. The only land use types which showed some increase are lands used for the extractive industry and for rural residential purposes. In 1981, 55.5% of all land in the rural area is used for agricultural purposes while 30% is woodland (Figure 4). A very small portion is used for residential, institutional, commercial/office industrial and extractive uses.

FIGURE 4



LAND USE DISTRIBUTION
RURAL AREA, R.M.O.C., 1981

7. Land Use Maps of Villages and Environs

The Land use maps of the 29 Villages and environs are presented in the following order:

Map 1 - Galetta
Map 2 - Fitzroy Harbour
Map 3 - Constance Bay
Map 4 - Woodlawn
Map 5 - Kinburn
Map 6 - Dunrobin
Map 7 - Carp
Map 8 - Stittsville
Map 9 - Richmond
Map 10 - Munster
Map 11 - Ashton
Map 12 - Fallowfield
Map 13 - North Gower
Map 14 - Kars
Map 15 - Manotick
Map 16 - Osgoode
Map 17 - Vernon
Map 18 - Marionville
Map 19 - Kenmore
Map 20 - Metcalfe
Map 21 - Greely
Map 22 - South Gloucester
Map 23 - Leitrim
Map 24 - Notre-Dame-des-Champs
Map 25 - Navan
Map 26 - Sarsfield
Map 27 - Carlsbad Springs
Map 28 - Vars
Map 29 - Cumberland

APPENDIX 1

The geographical scope of the 1981 survey covers the entire area of the Regional Municipality of Ottawa-Carleton. The land use maps cover the urban area, the rural area and 29 villages.

The methodology used for the survey is described below:

i) In the summer of 1980, using the 1978 aerial photographs, urban land use within the outer limit of the greenbelt were identified on field maps of 1:1250. For the rural areas, information from the 1978 aerial photographs and the National Topographic Series maps were identified on field maps of 1:12,500.

ii) Field checks were then conducted to verify or change the information identified on the field maps for the urban and rural areas.

iii) 1980 Land use information for the West Urban Community, East Urban Community, Barrhaven and the 29 villages were provided by the Plans Administration Division of the Regional Planning Department.

iv) In 1981, the information was reviewed and up-dated by staff of the area municipalities.

v) Using an electronic planimeter, the land area of each parcel was calculated from the field maps and aggregated, by type of land use, for each municipality and for the Region.

vi) Land use information from the field maps were transferred to maps of 1:10,000 scale for the urban and 1:12,500 scale for the rural area.

vii) These maps were subsequently reduced to the scale of 1:25,000 and 1:100,000 respectively for publication.

The survey adopted the principal use approach in which a single land use category is assigned to the entire site. For example, a factory complex is assigned to light industry even though, in addition to the actual manufacturing process, the site may include administrative offices, parking and on-site retail outlet. In the case of mixed use buildings, the predominant land use category is assigned.

Since the land areas are aggregated from an individual site or grouping of sites of similar land use, the figures shown in tables of this report and on the maps exclude roads, rivers, lakes and canals.

It is important to note that the result of the survey shows the uses of the land in 1981. It does not represent any future or intended use.

For the purpose of this report, the definition of open space, recreation and vacant land are as follows:

Open Space: Open space includes those lands which are being landscaped and/or maintained e.g. grass-cutting. Most of the open space lands are owned by public agencies and generally found along transportation corridors.

Recreation: Recreation includes both active and passive recreation. Active recreation areas include area of intensive recreational facilities such as playgrounds, Golf Courses, Athletic Clubs and Sports complexes. Passive recreation areas are lands generally used for informal or unorganized recreational activities such as walking trails. Such areas usually possess certain scenic or natural features eg. wooded areas.

Vacant Land: Vacant land includes all open land not maintained, landscaped or being used for any purposes.

APPENDIX 2

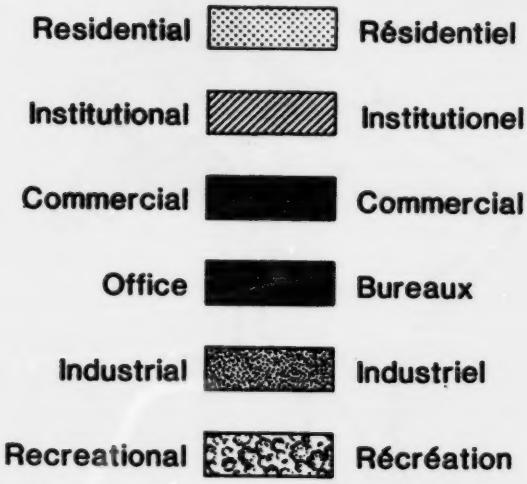
1. The following sources of information were also used to supplement the 1978 aerial photographs and the field checks:

   - Vacant Land Study 1980 RMOC
   - Federal Land Inventory 1978 NCC
   - Land use map of the green-belt, 1976 Agriculture Canada.

2. The 1961 land use information is based on a map (Scale 1:20,000) contained in the City of Ottawa Official Plan Amendment 19. Areas of each land use category were planimetered by staff of the Regional Planning Department. Due to differences in (i) definitions of some land use categories between the 1961 information and the categories adopted by the Regional Planning Department; and (ii) methodology in land area calculations between the 1971 and 1981 information, certain modifications were made to the 1961 and 1971 information to ensure compatability with the 1981 information.

SECTION 7

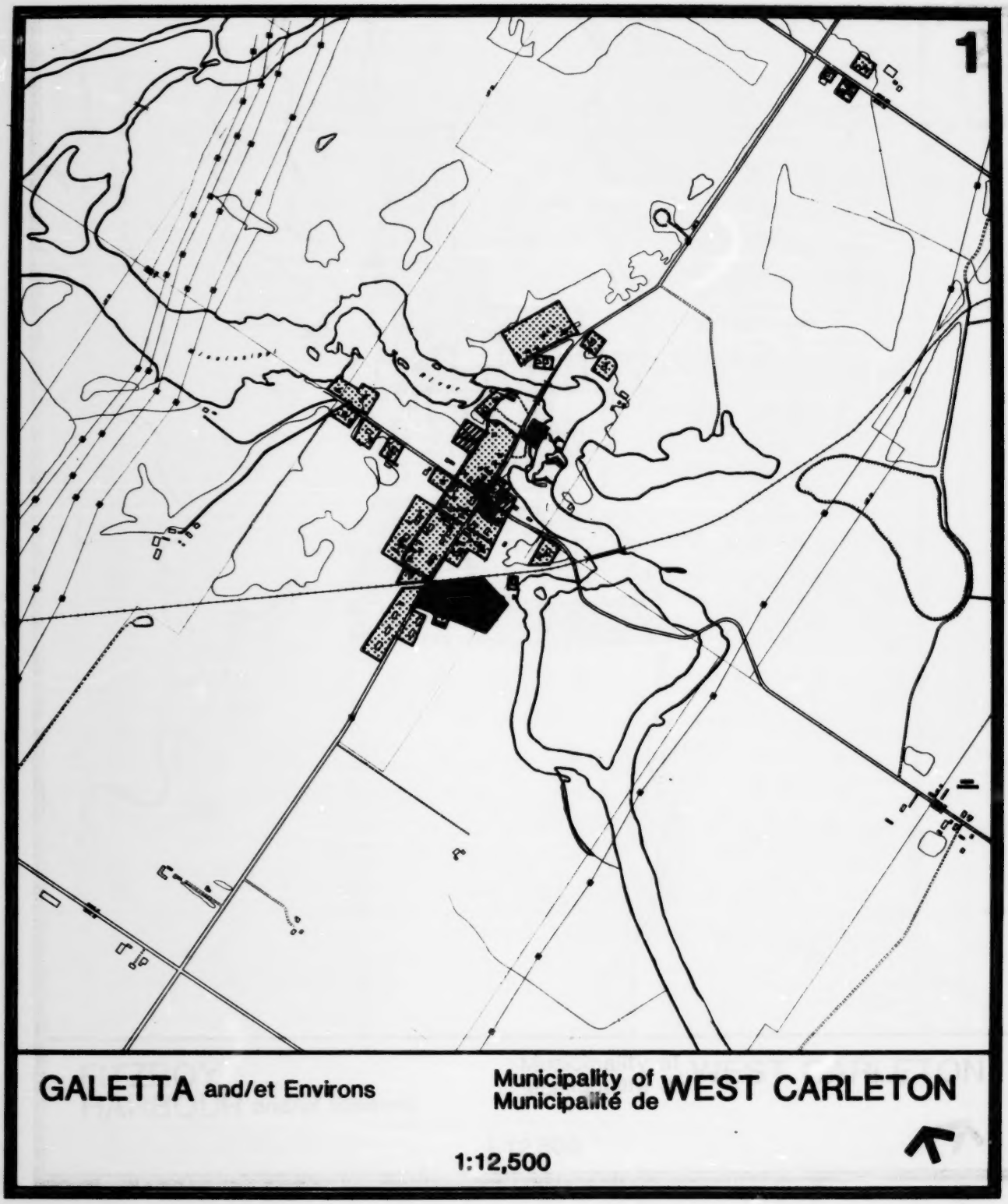
1981 VILLAGE AND ENVIRONS LAND USE



UTILISATION DES TERRAINS DU VILLAGE ET DES ENVIRONS - 1981

1981 VILLAGE AND ENVIRONS
LAND USE

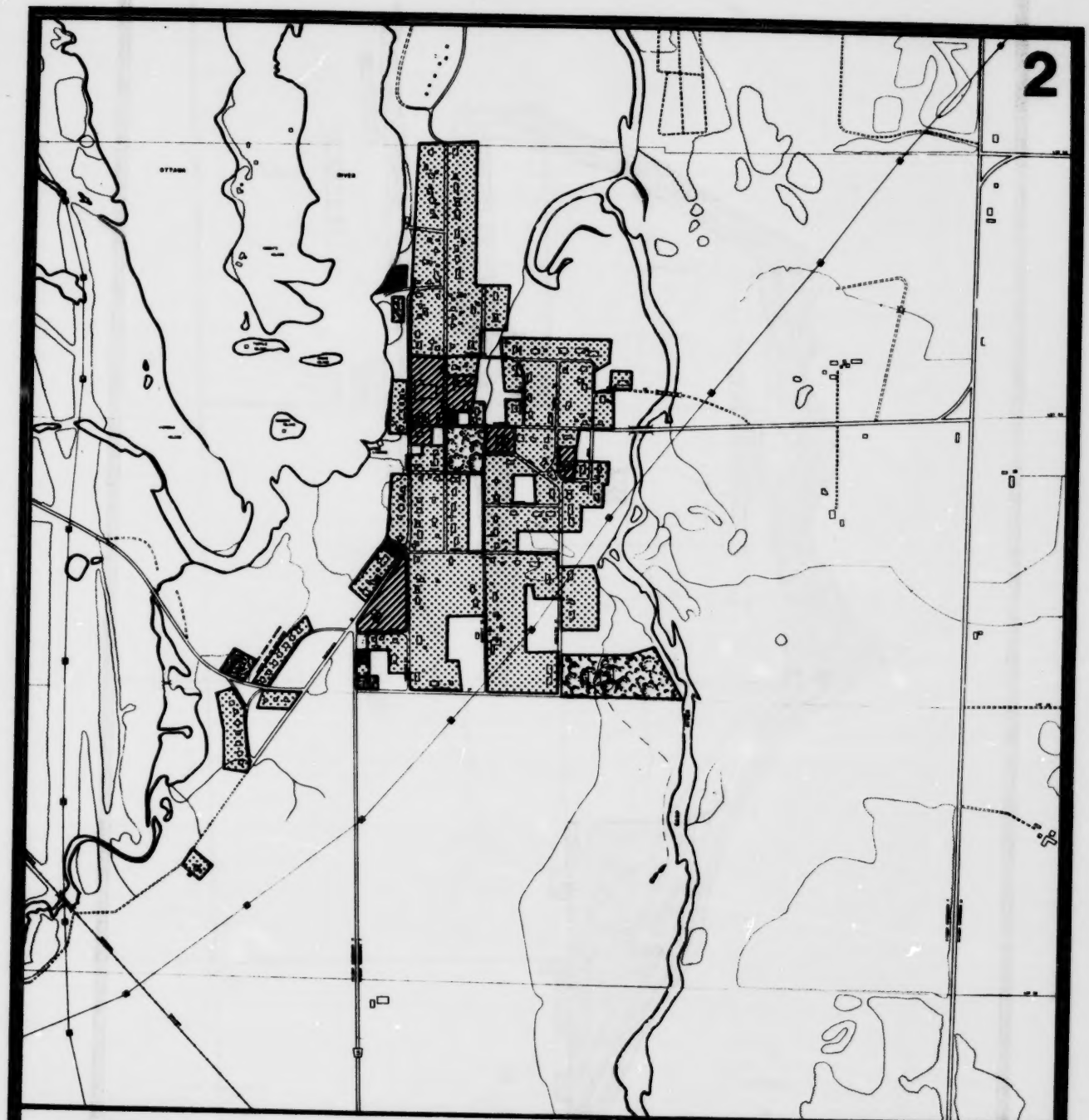
UTILISATION DES TERRAINS DU VILLAGE
ET DES ENVIRONS - 1981



GALETTA and/et Environs

Municipality of / Municipalité de **WEST CARLETON**

1:12,500



FITZROY HARBOUR and/et Environs

Municipality of / Municipalité de **WEST CARLETON**

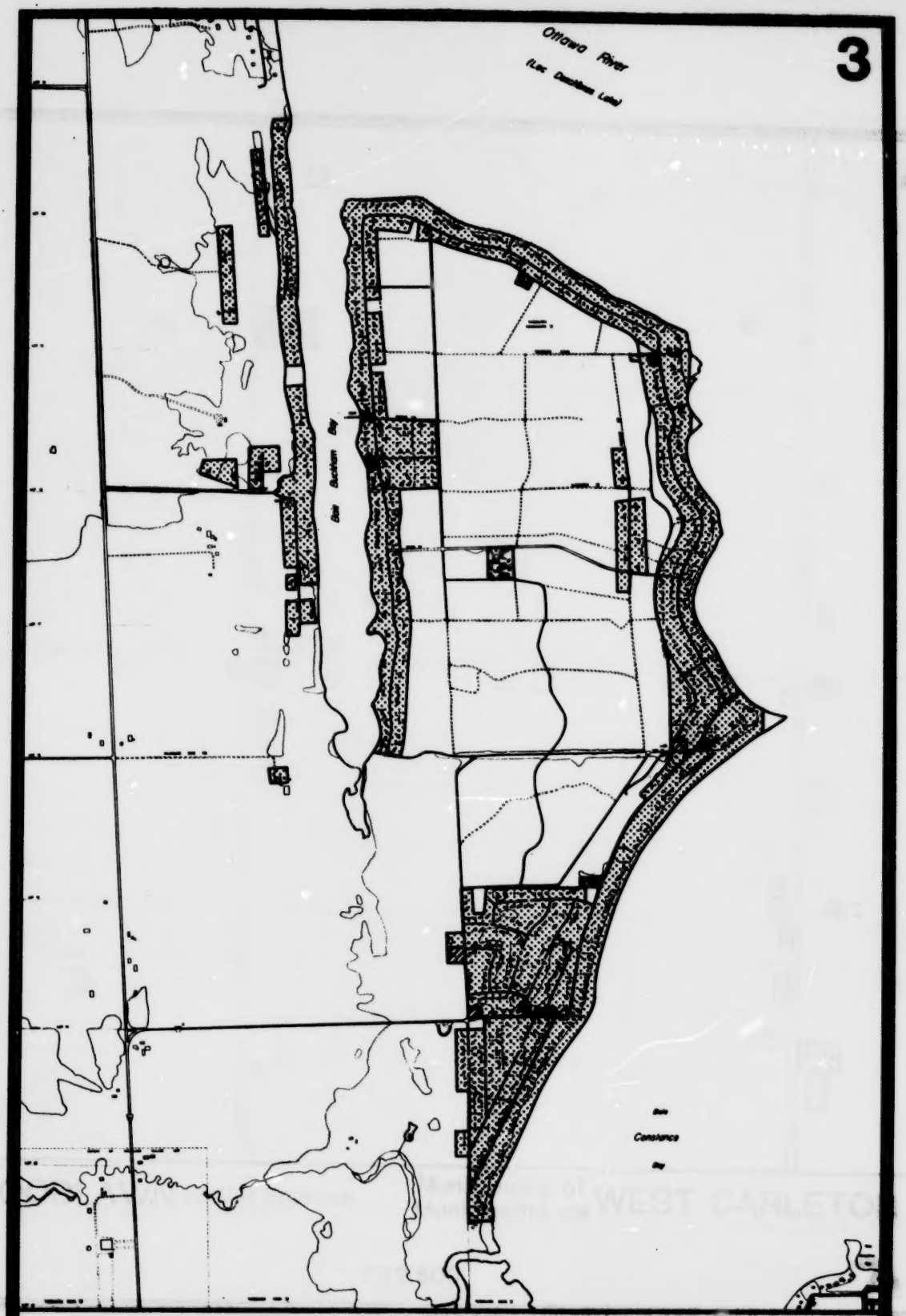
1:12,500

2

FITZROY
HARBOUR

Municipality of WEST CARLETON
Municipalité de

1:12,500



CONSTANCE BAY and/et Environs

Municipality of / Municipalité de **WEST CARLETON**

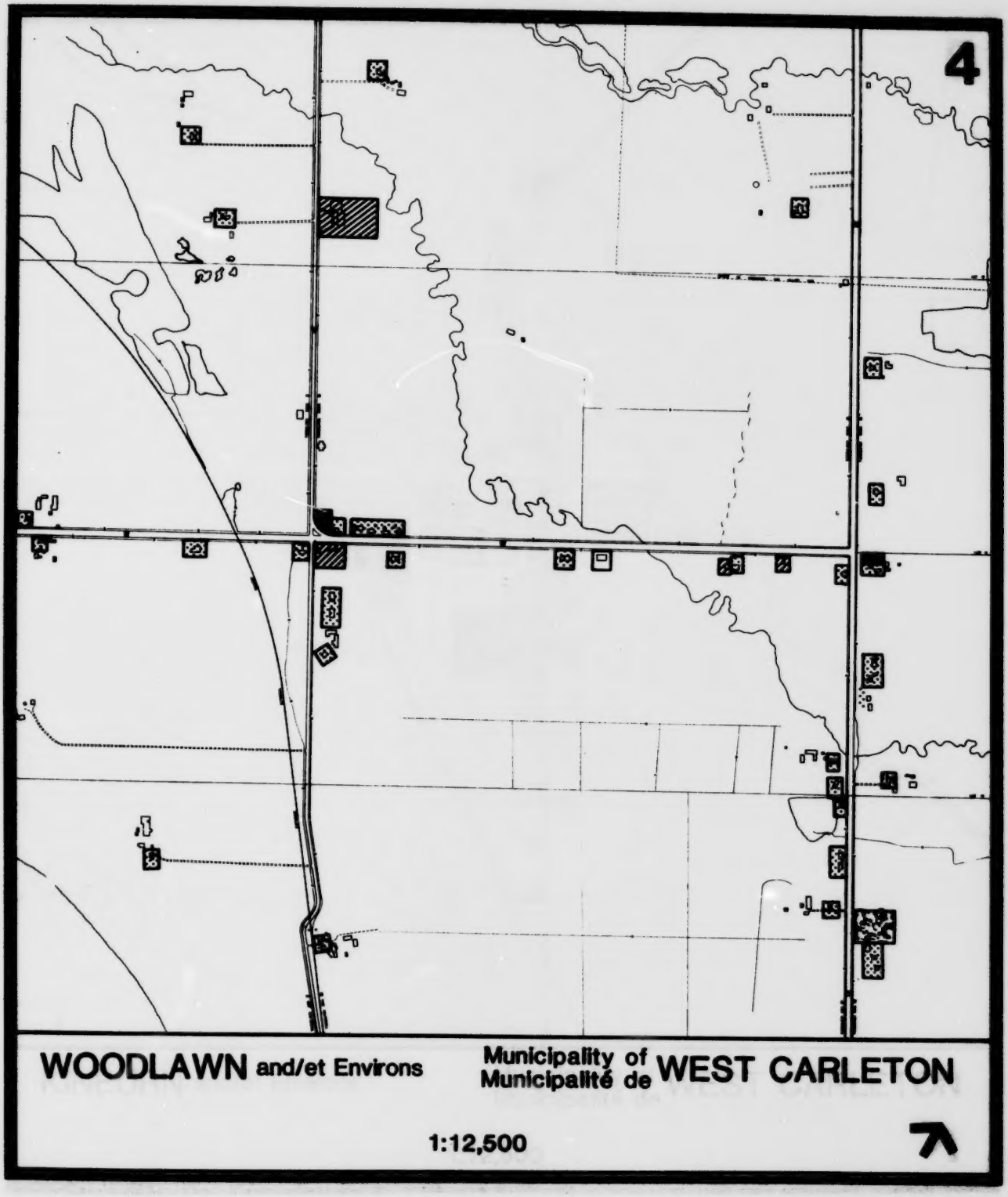
1:12,500

3

CONSTANCE
BAY and/et Environs

Municipality of WEST CARLETON
Municipalité de

1:12,500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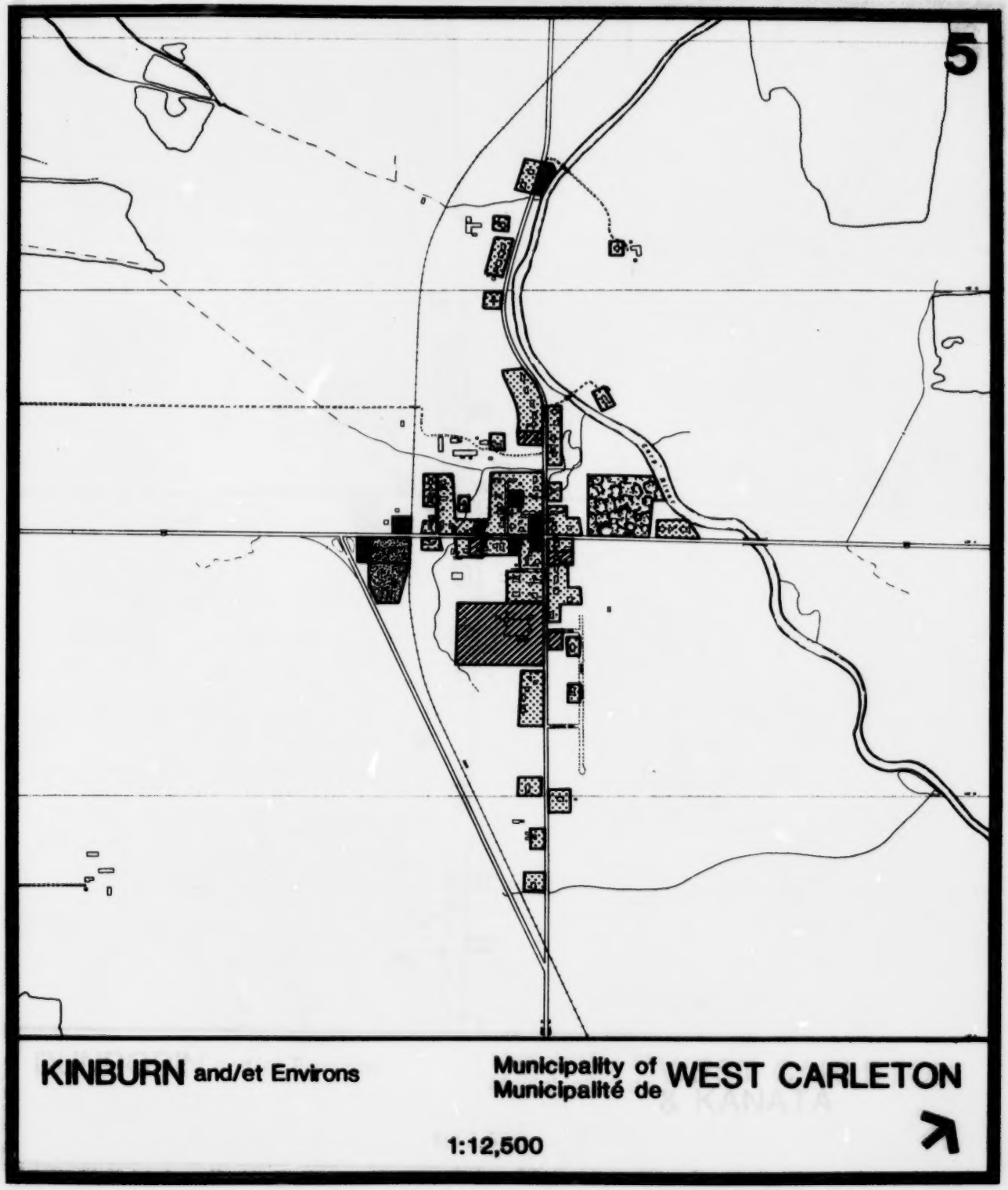
WOODLAWN and/et Environs
Municipality of
Municipalité de WEST CARLETON
1:12,500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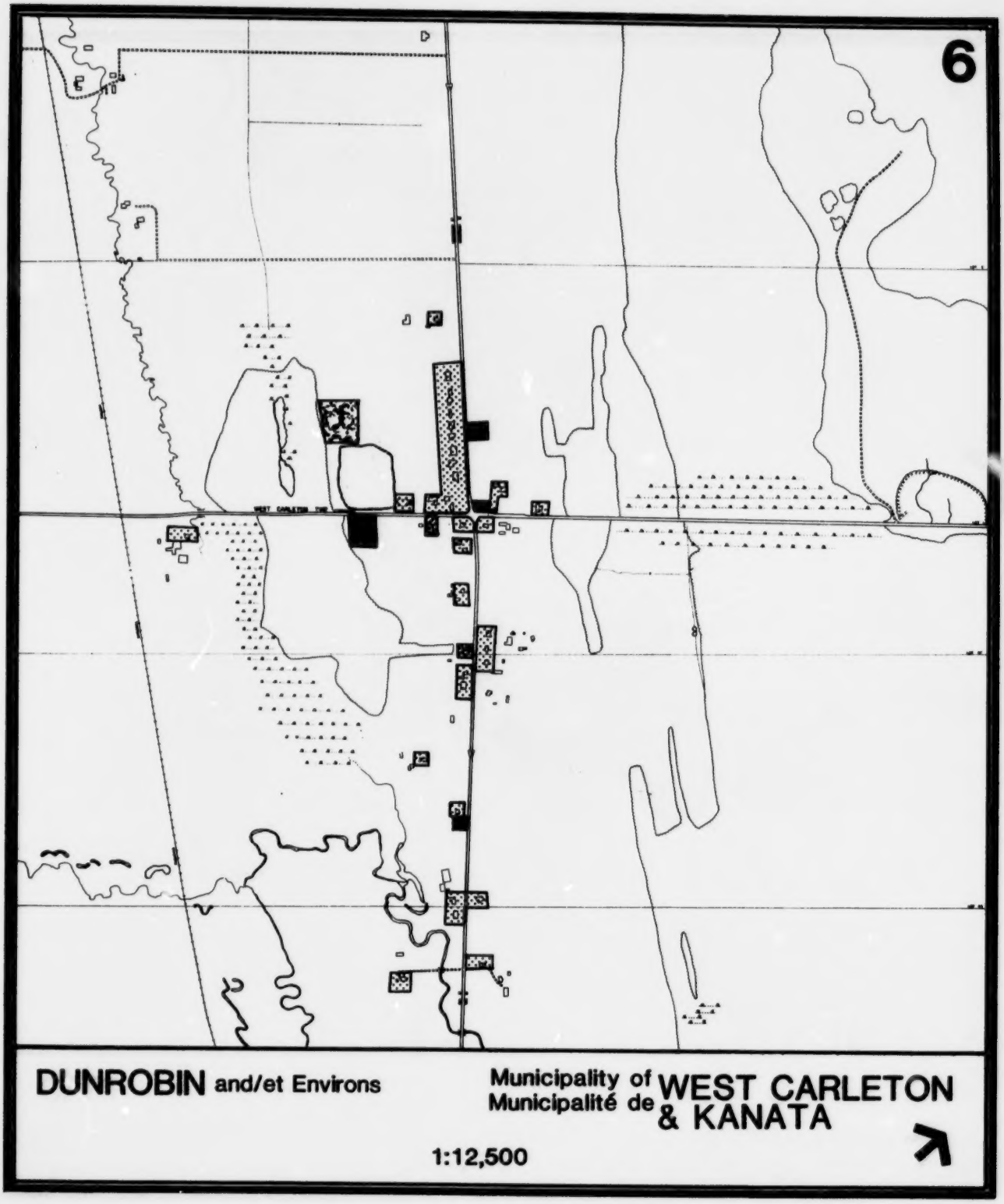
KINBURN and/et Environs
Municipality of
Municipalité de
WEST CARLETON
1:12,500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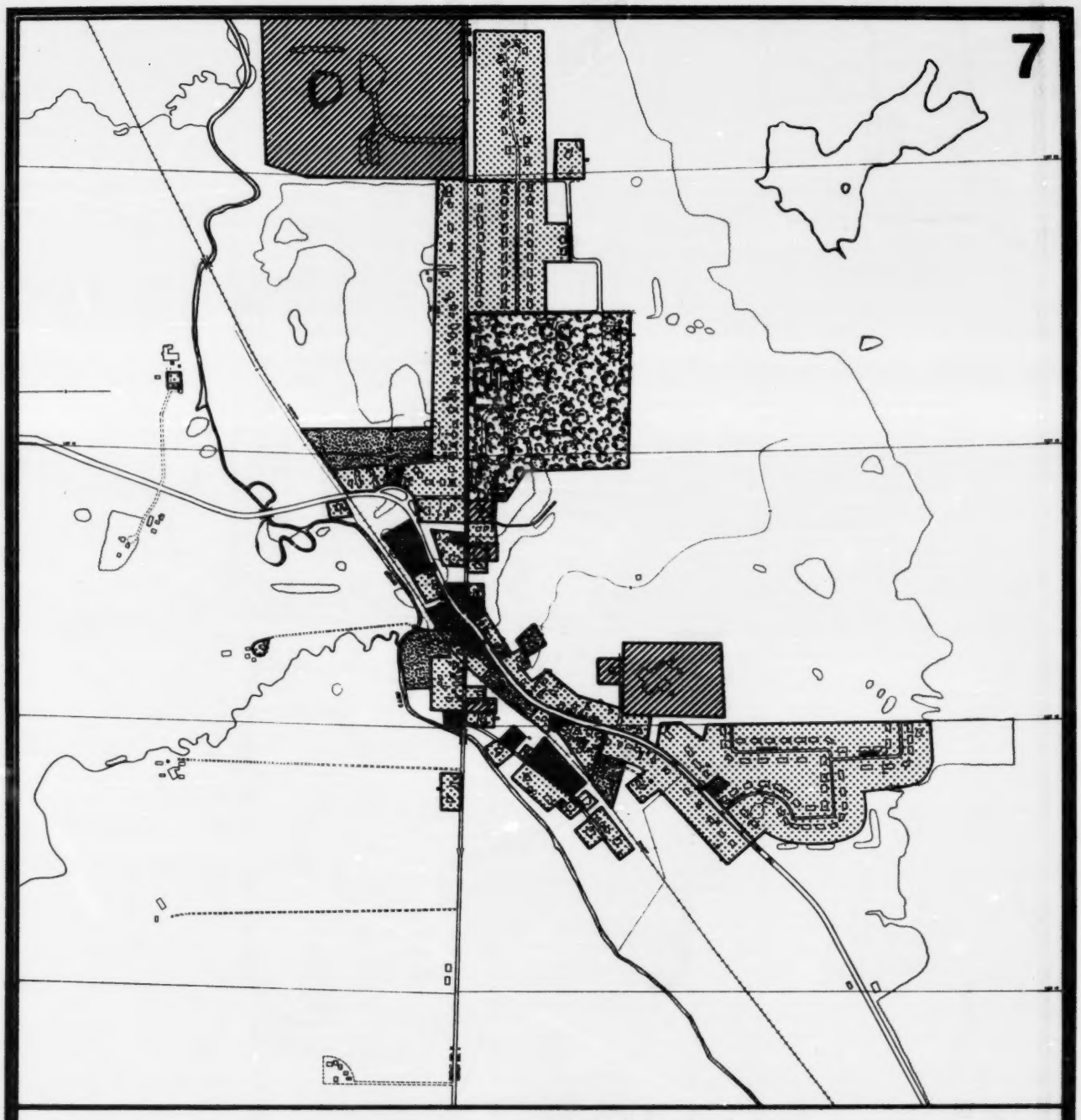
DUNROBIN and/et Environs
Municipality of
Municipalité de
WEST CARLETON
& KANATA
1:12,500

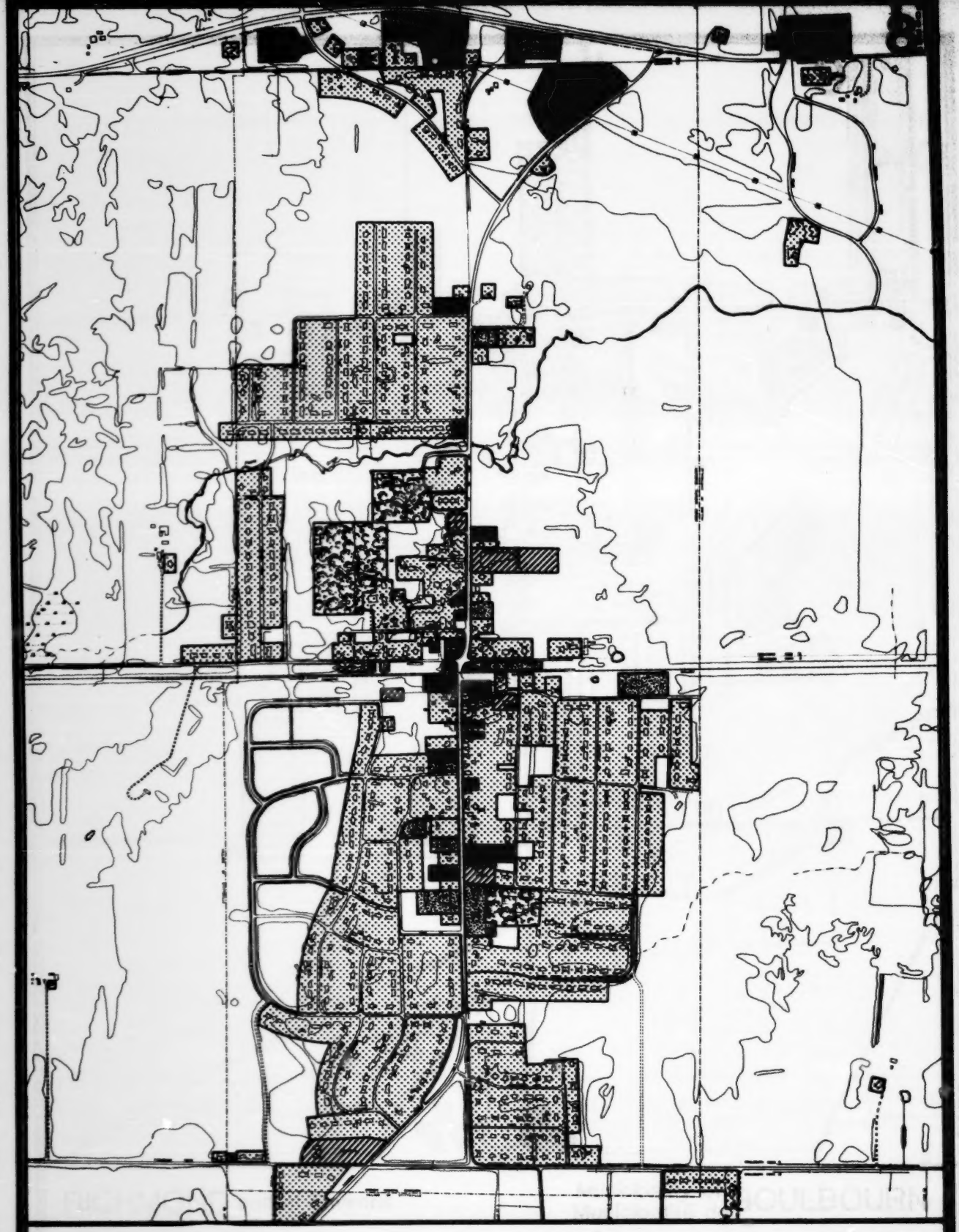


CARP and/et Environs

Municipality of
Municipalité de **WEST CARLETON**

1:12,500

7



STITTSVILLE and/et Environs

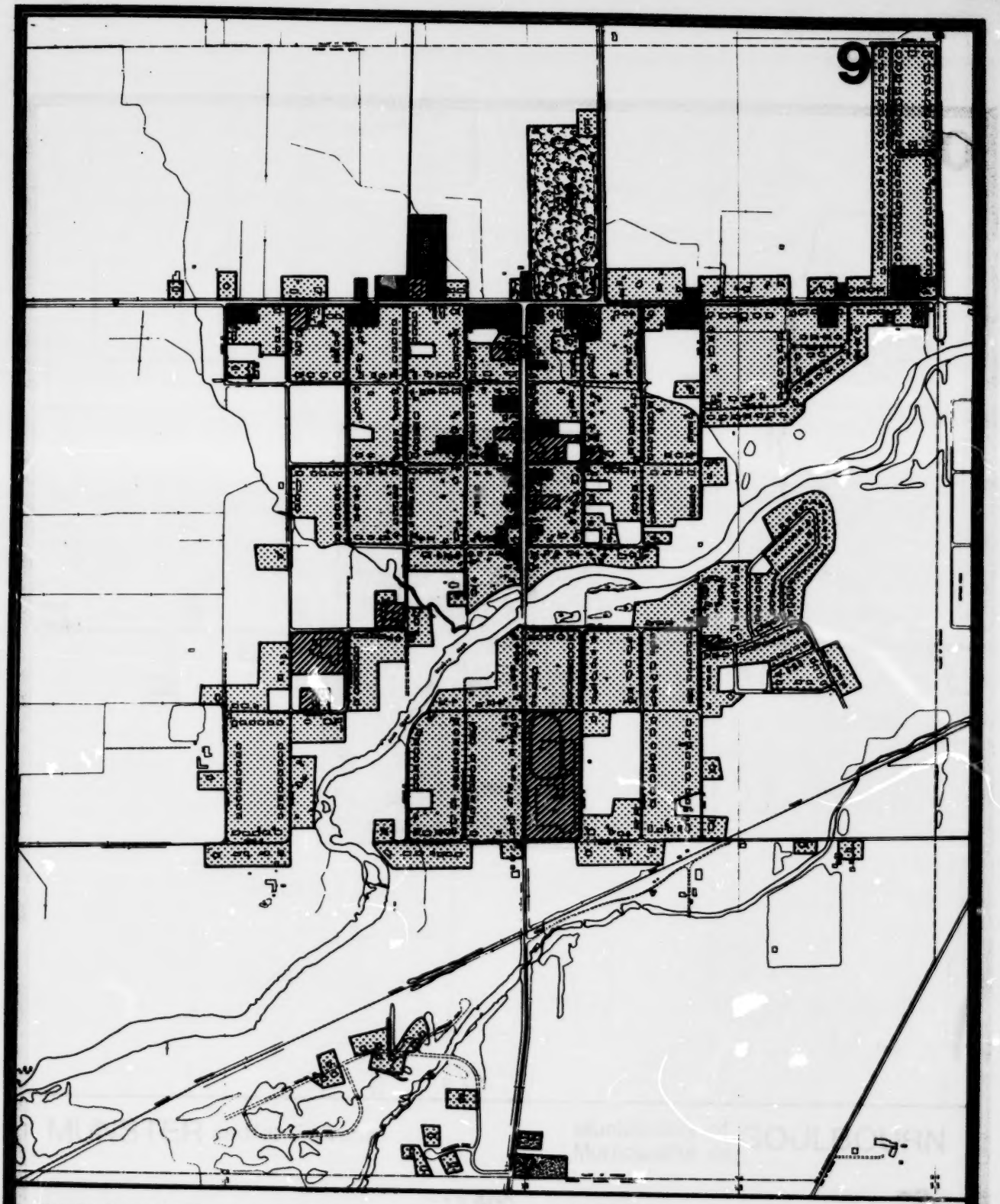
Municipality of
Municipalité de **GOULBOURN**

1:12,500

8

Municipality of GOULBOURN
Municipalité de

1:12,500



RICHMOND and/et Environs

Municipality of
Municipalité de **GOULBOURN**

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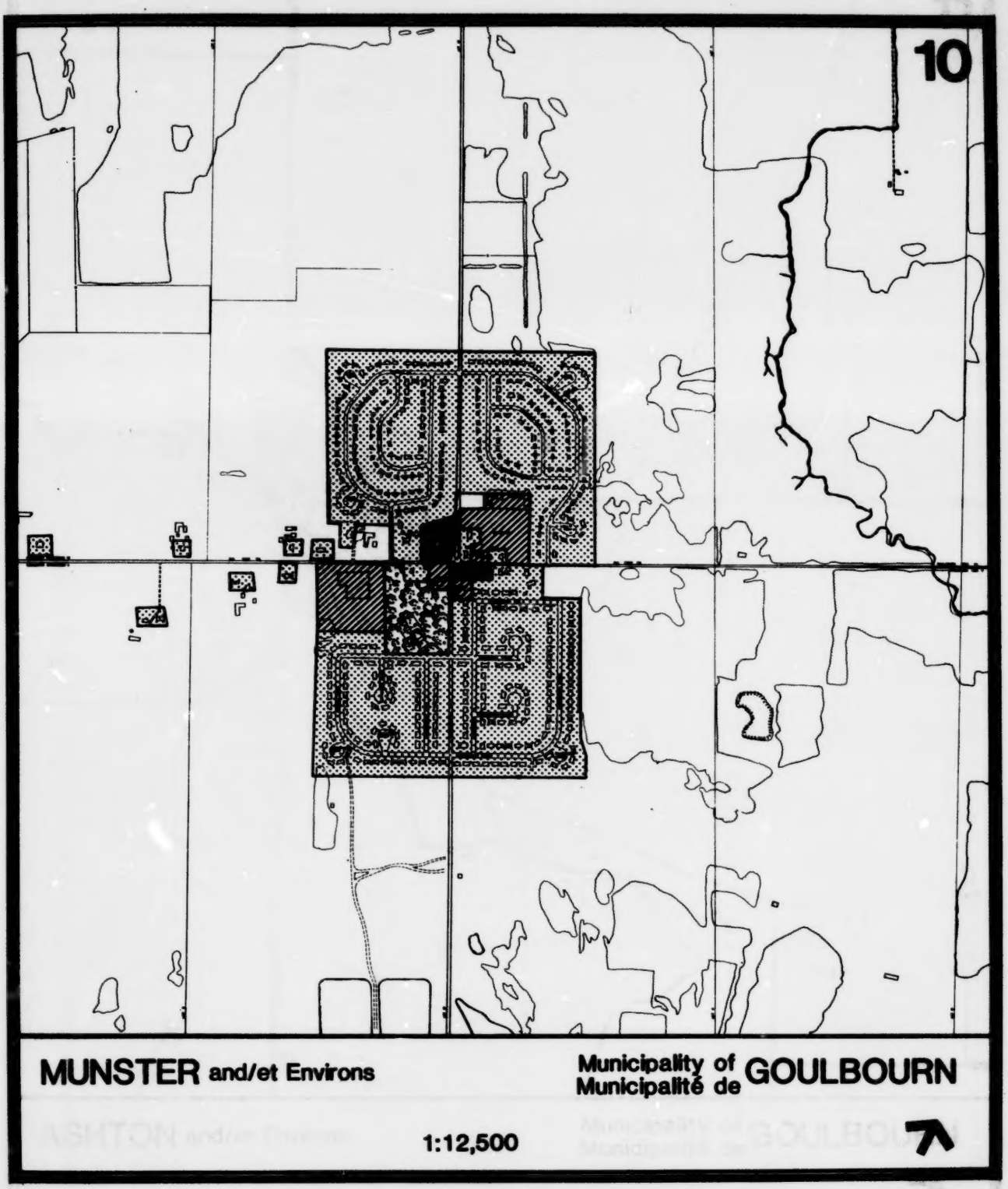
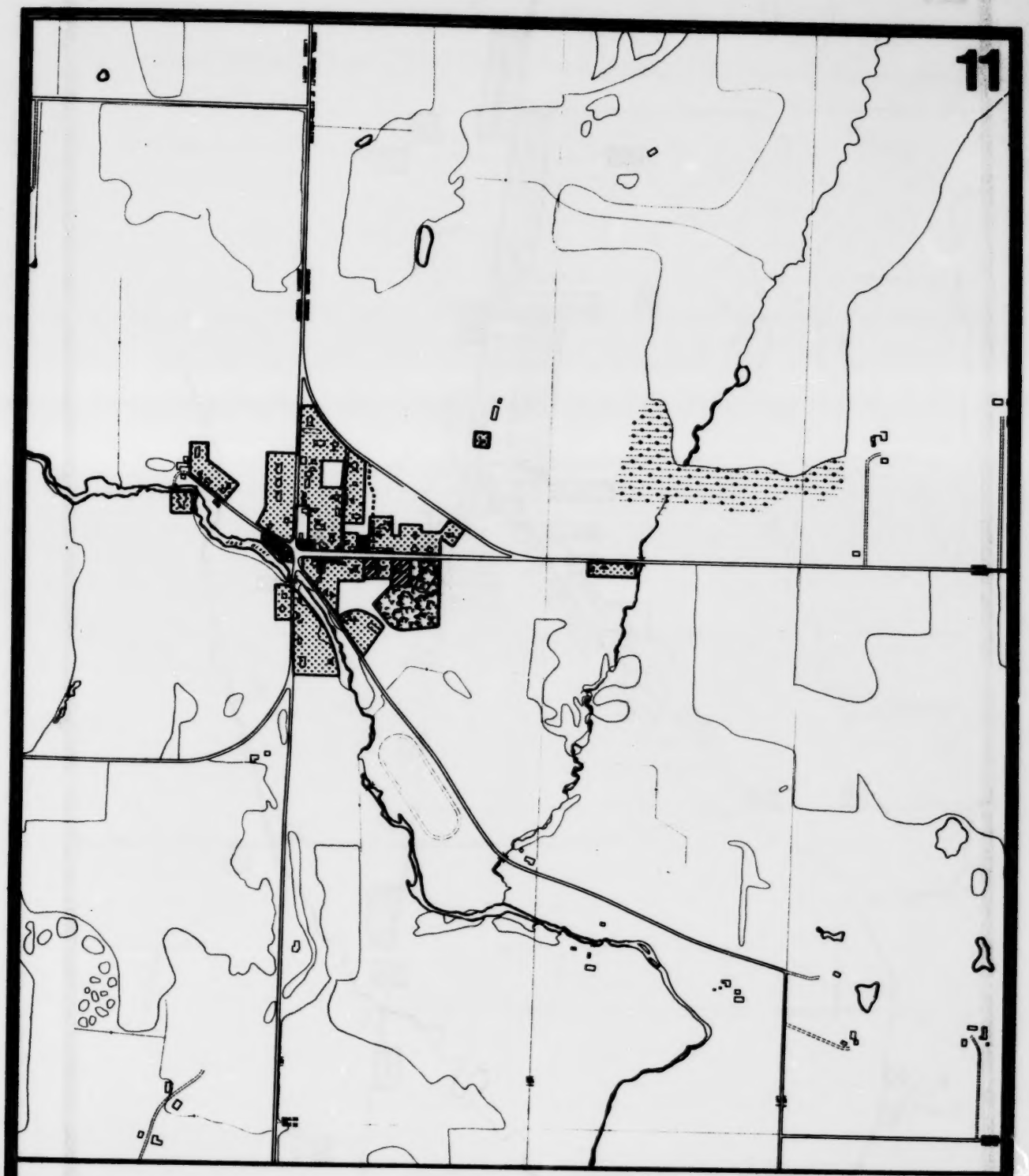


MUNSTER and/et Environs

Municipality of
Municipalité de **GOULBOURN**

1:12,500

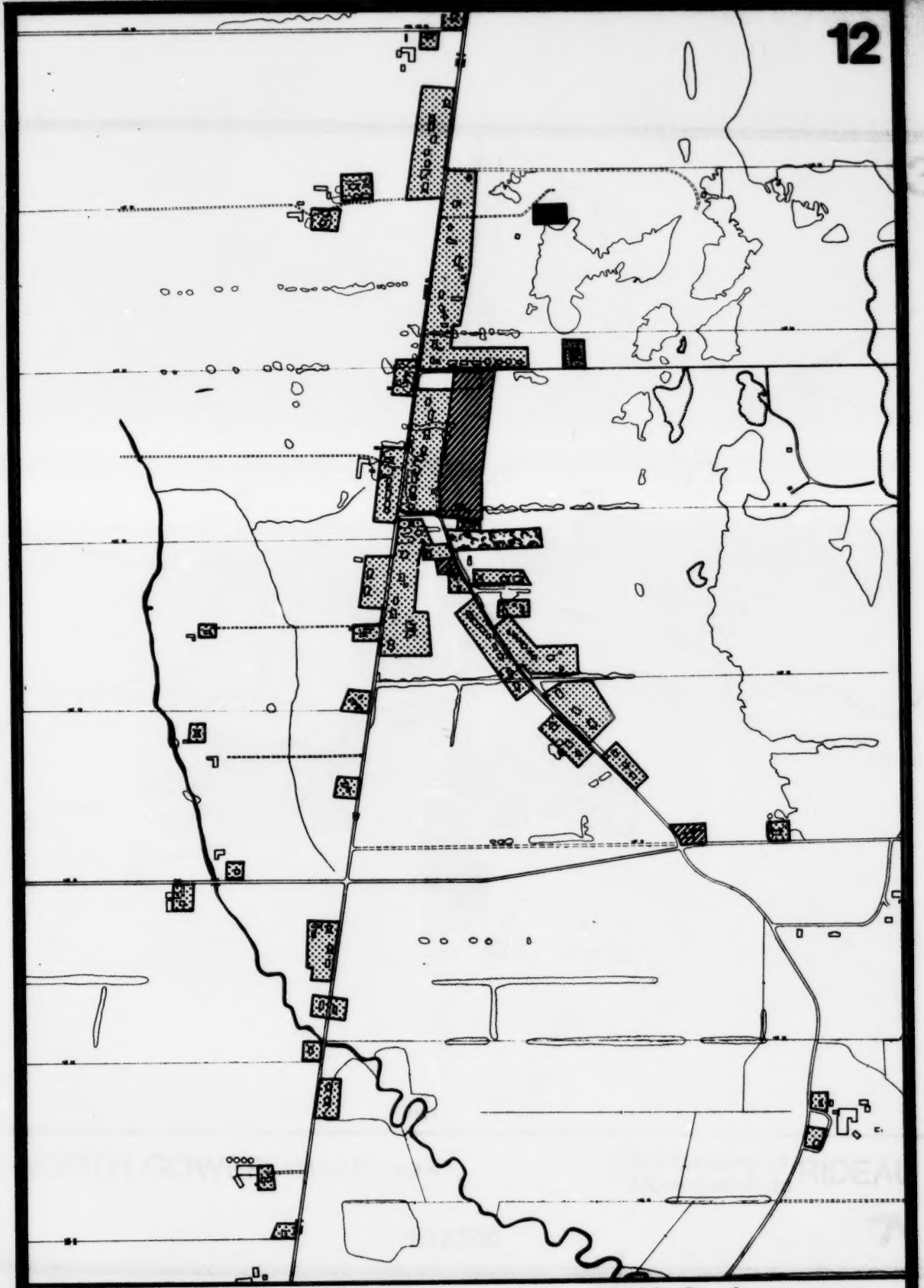
10
Municipality of GOULBOURN
Municipalité de



ASHTON and/et Environs

Municipality of / Municipalité de **GOULBOURN**

1:12,500



FALLOWFIELD and/en Environs

Municipality of
Municipalité de **NEPEAN**

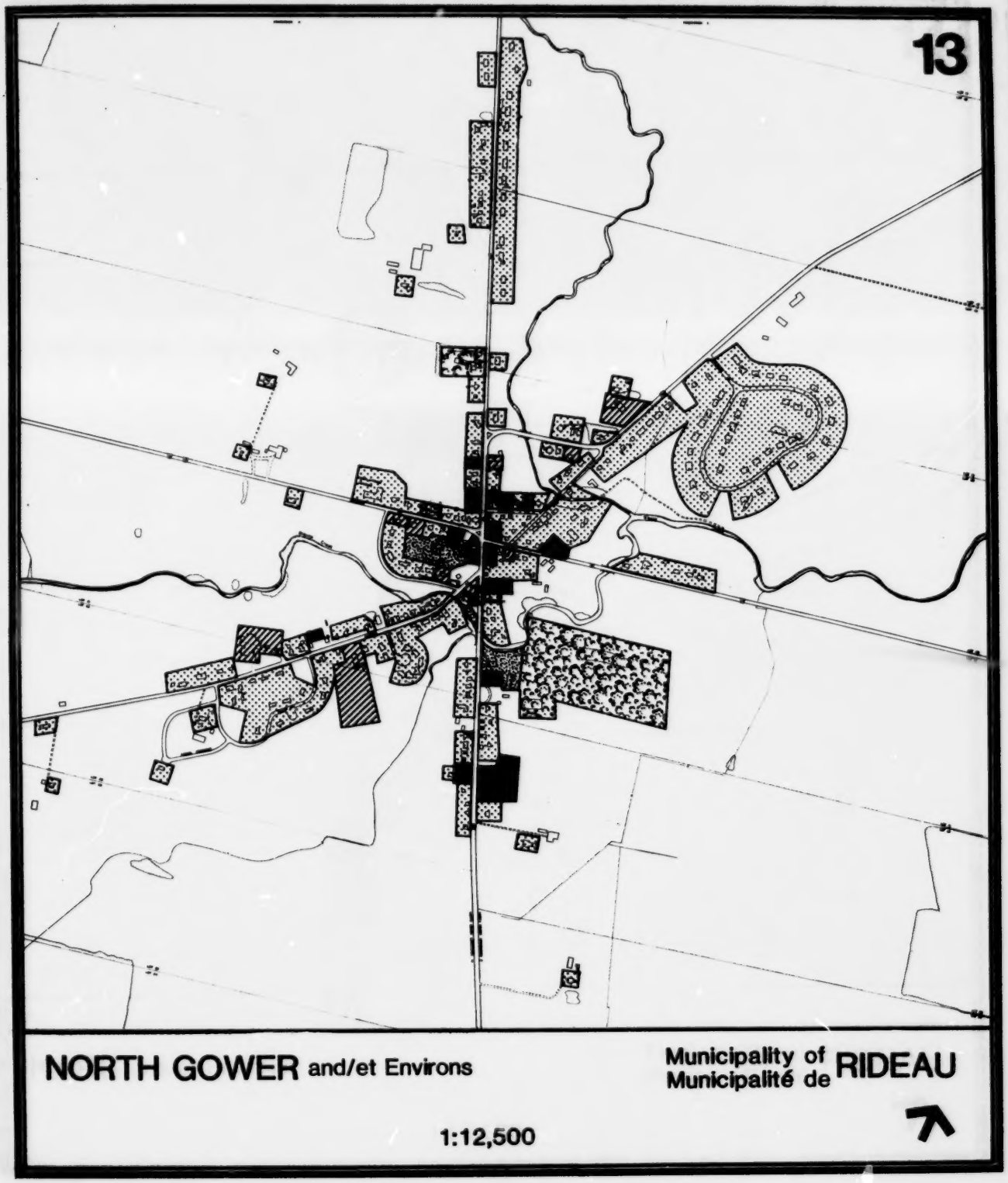
1:12,500

12

FALLOWFIELD and/et Environs

Municipality of NEPEAN
Municipalité de

1:12,000



NORTH GOWER and/et Environs

Municipality of
Municipalité de **RIDEAU**

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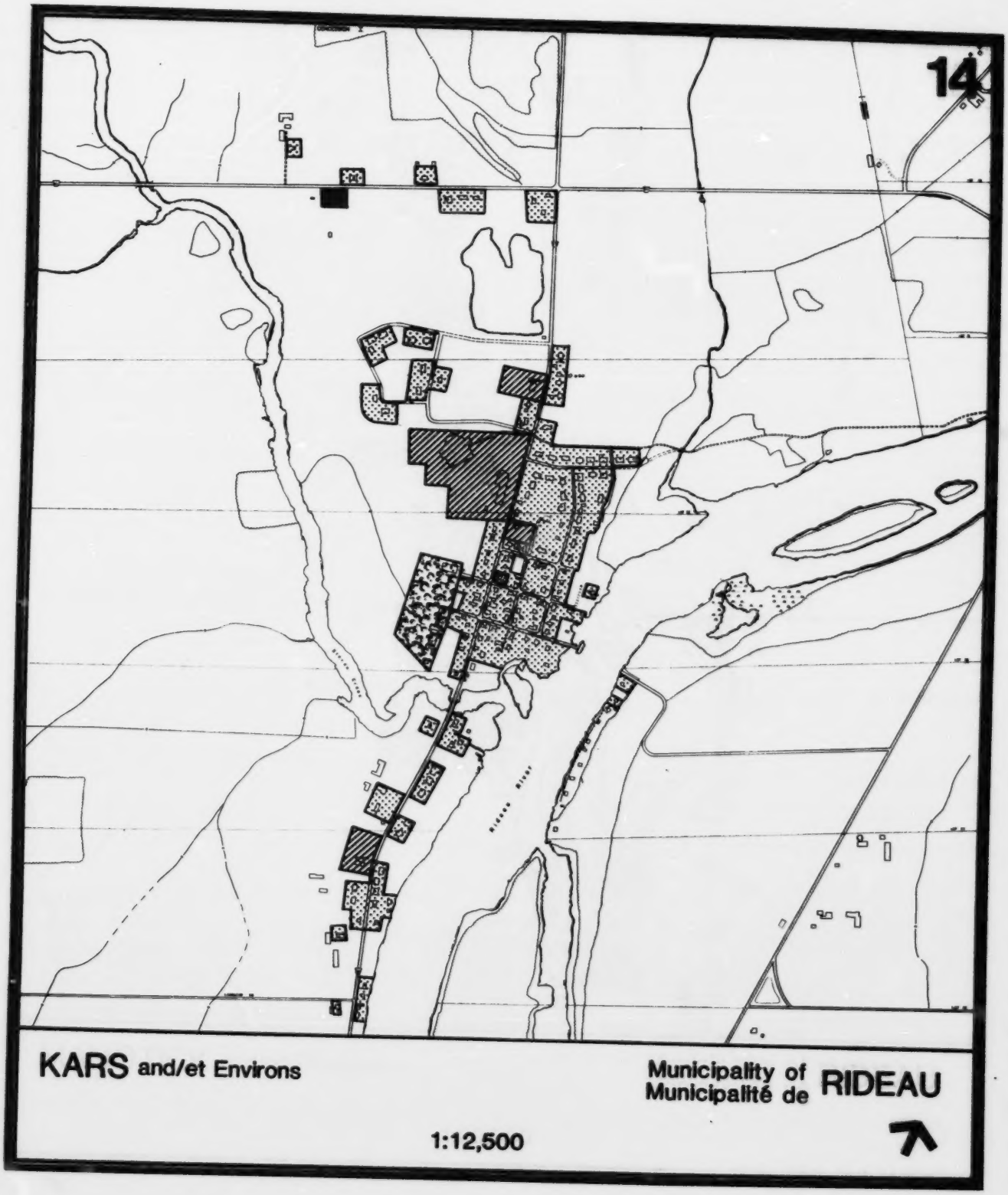

KARS and/et Environs

Municipality of
Municipalité de **RIDEAU**

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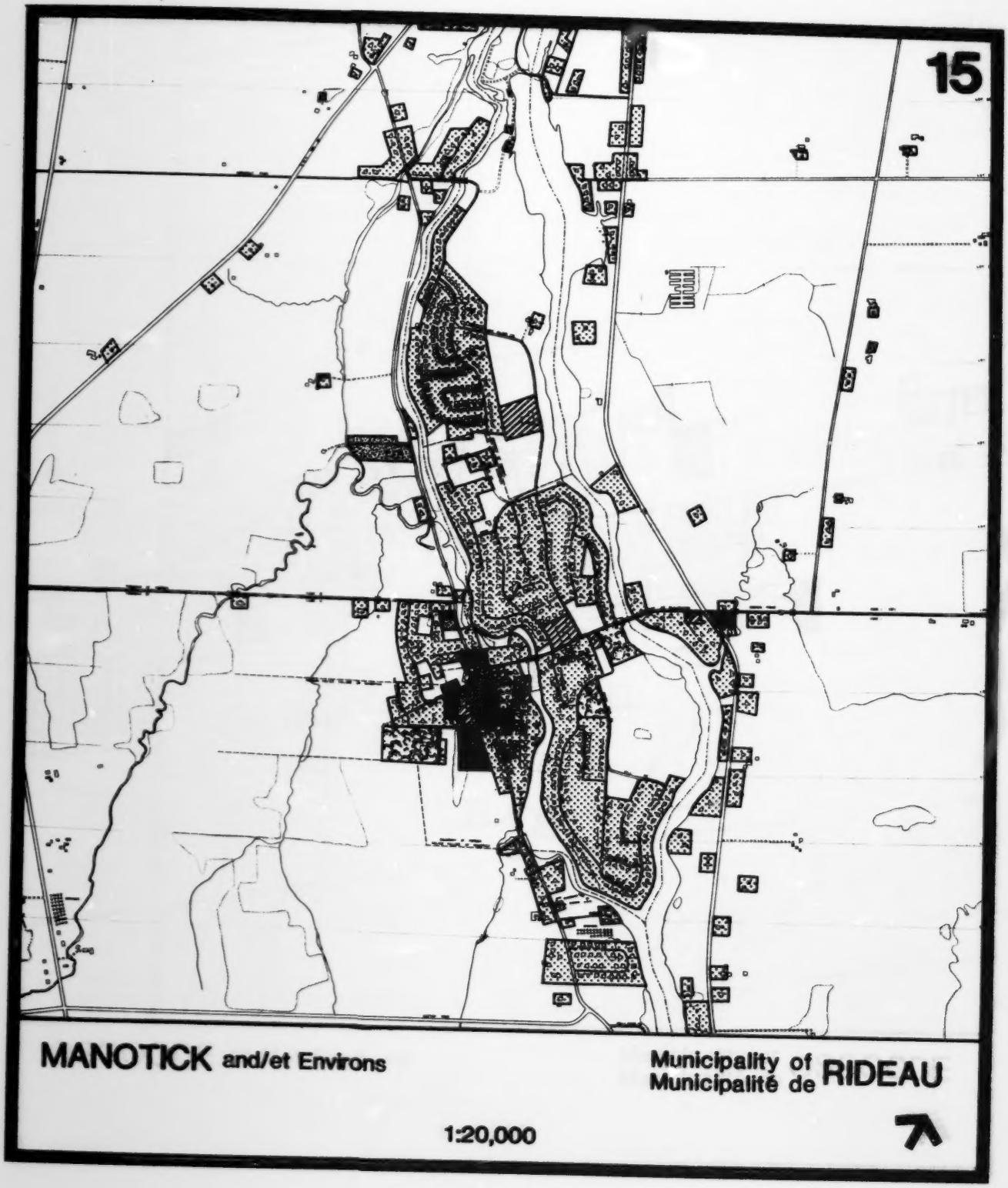
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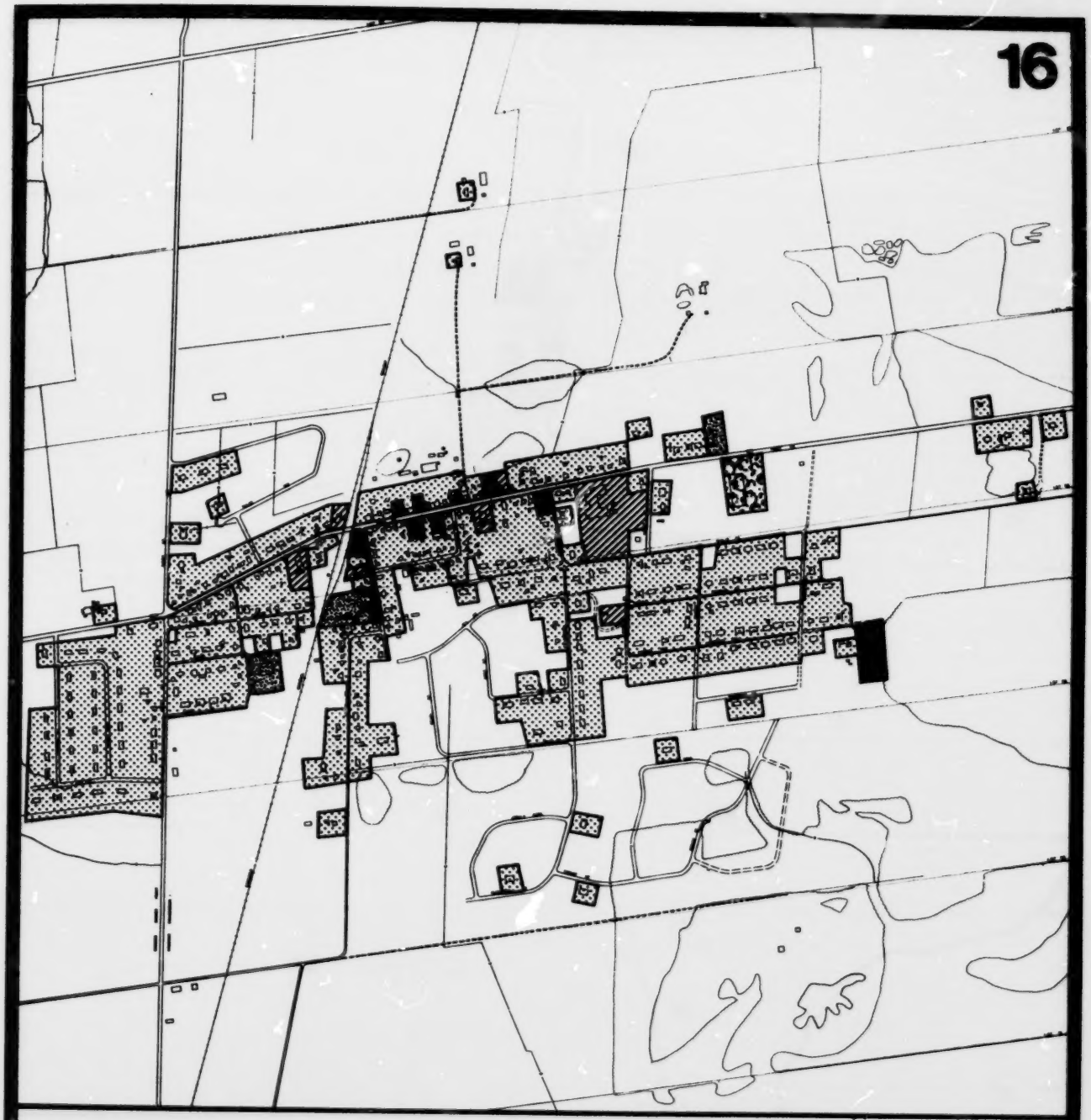
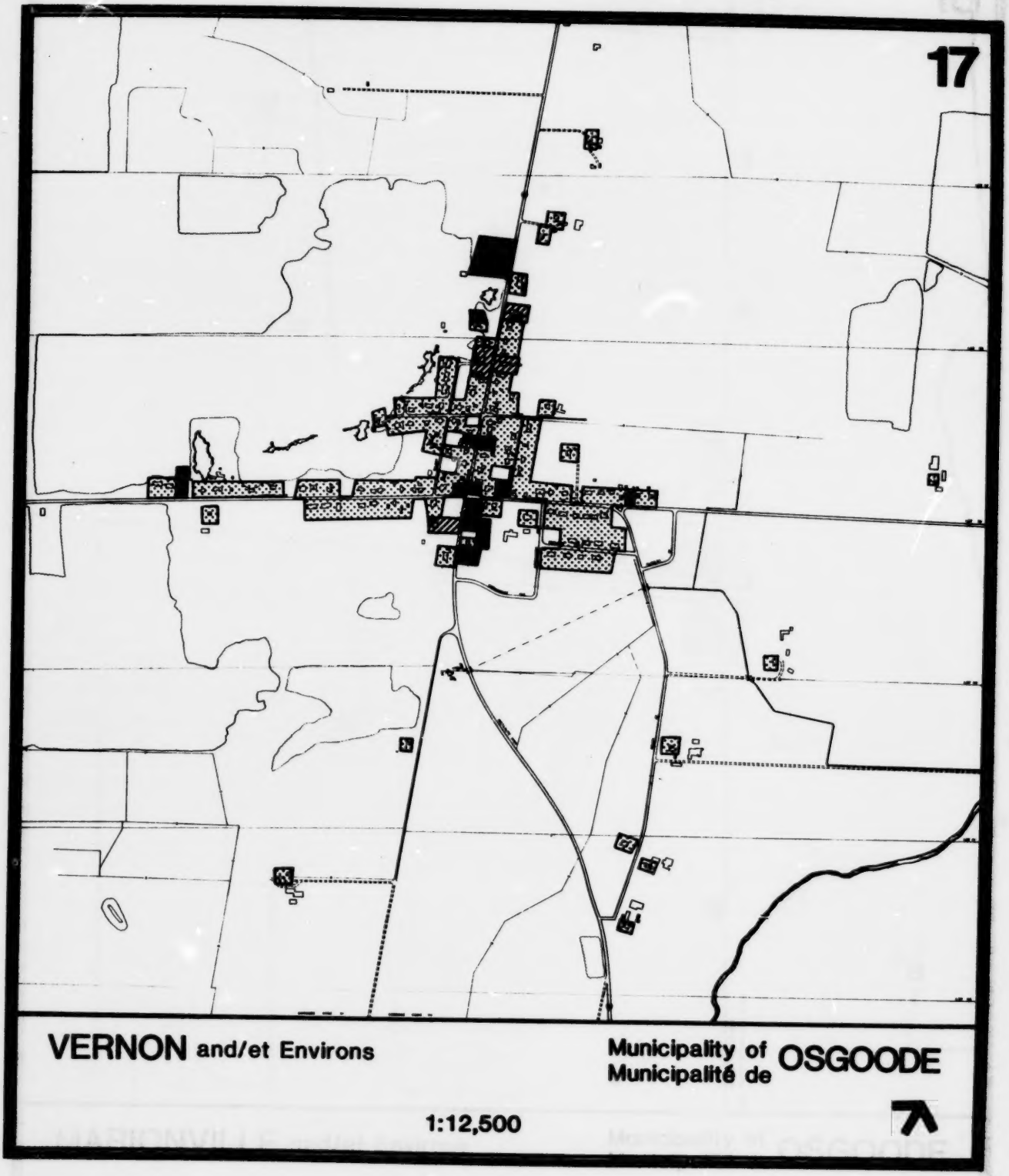
MANOTICK and/et Environs
Municipality of
Municipalité de RIDEAU
1:20,000



OSGOODE and/et Environs

Municipality of
Municipalité de **OSGOODE**

1:12,500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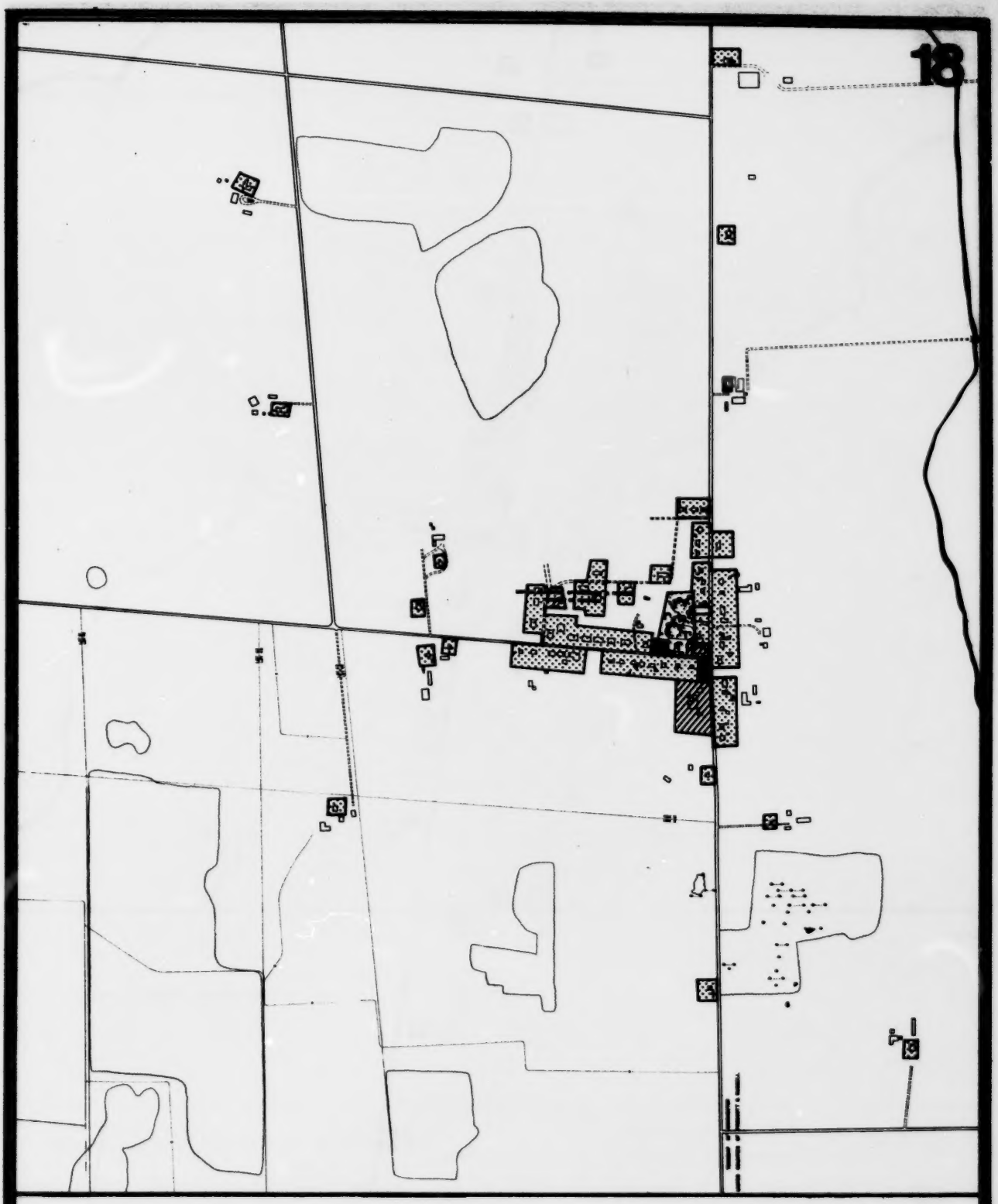
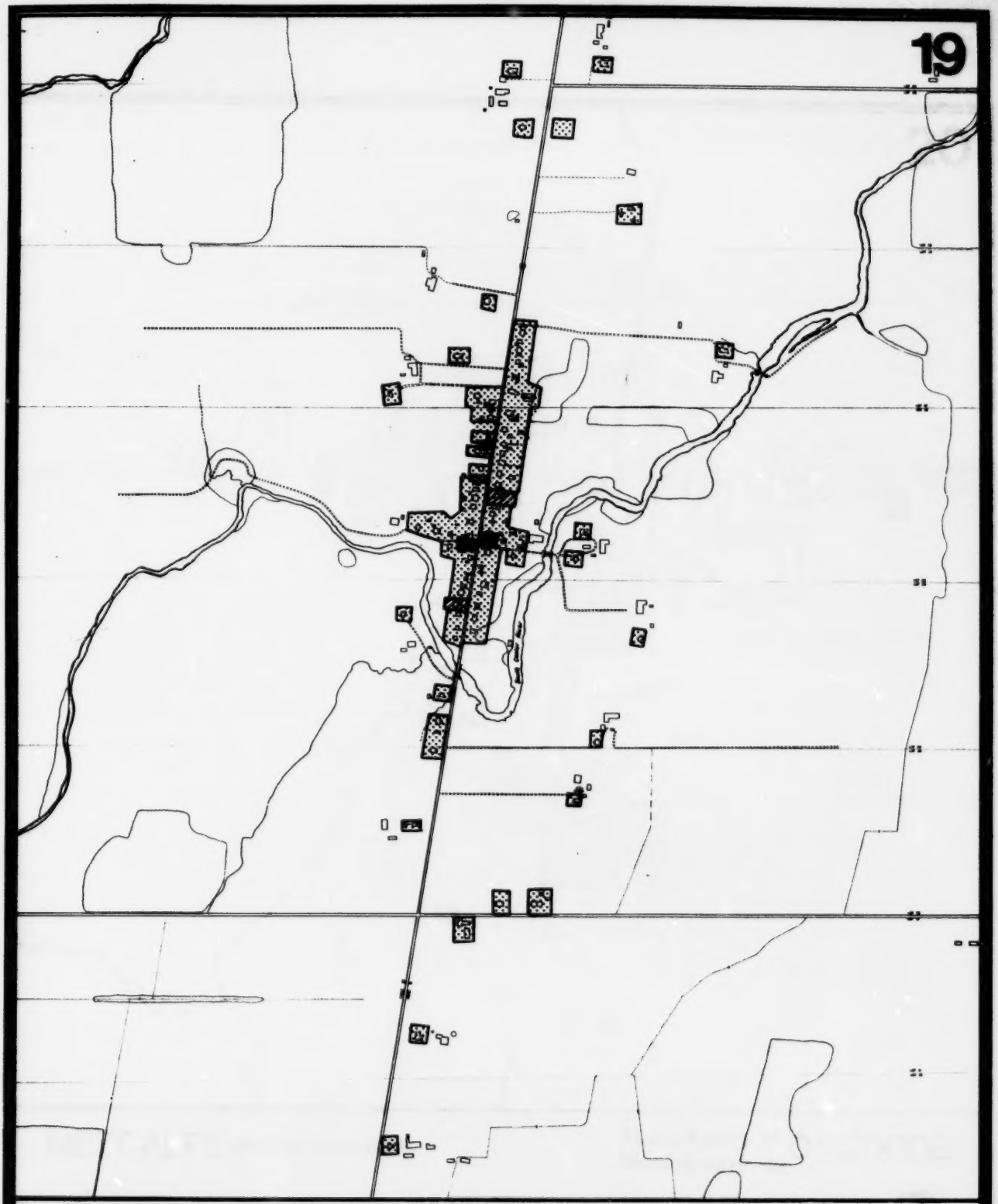
VERNON and/et Environs
Municipality of
Municipalité de
OSGOODE
1:12,500



MARIONVILLE and/et Environs

Municipality of
Municipalité de **OSGOODE**

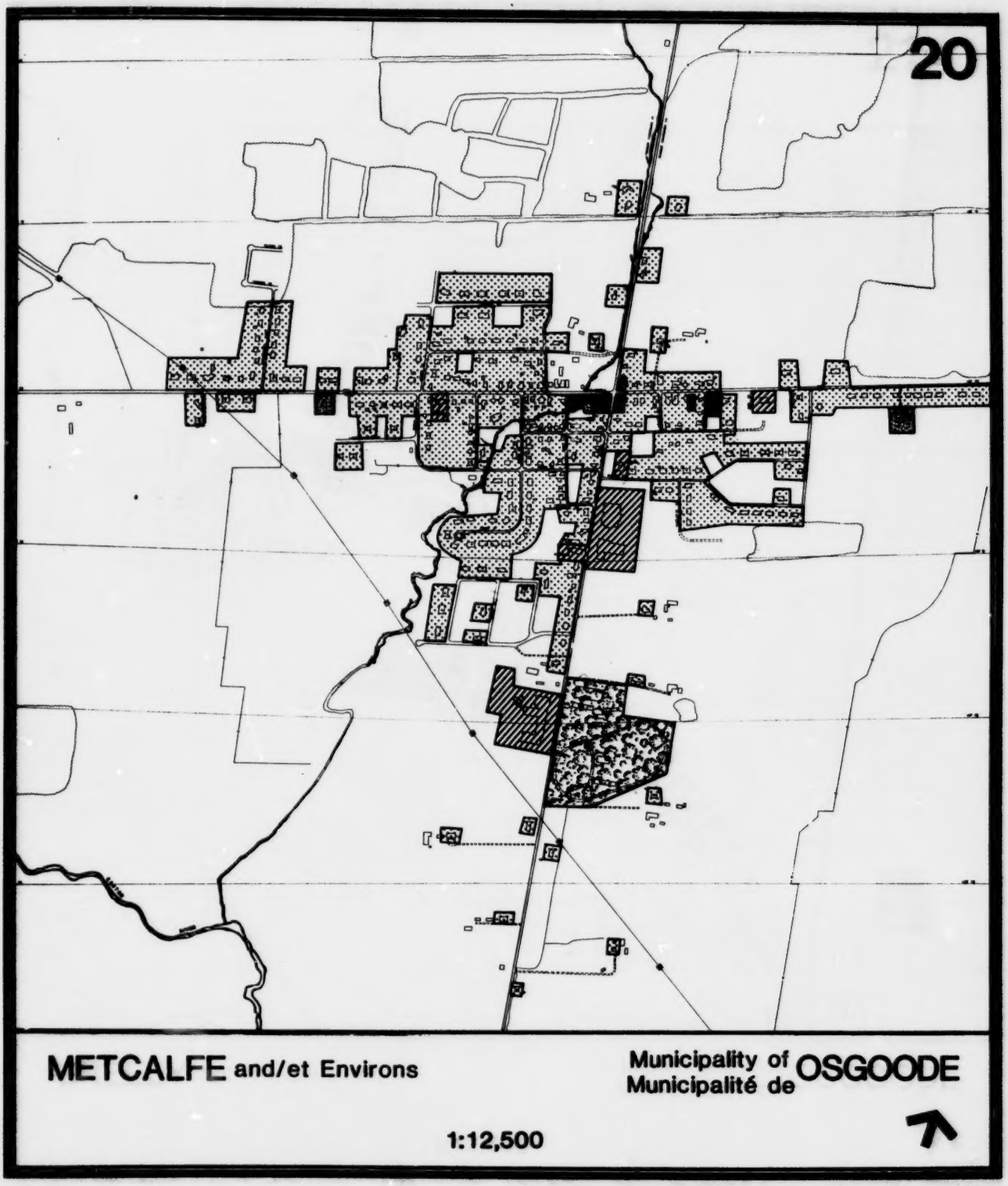
1:12,500



KENMORE and/et Environs

Municipality of
Municipalité de **OSGOODE**

1:12,500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METCALFE and/et Environs
Municipality of
Municipalité de OSGOODE
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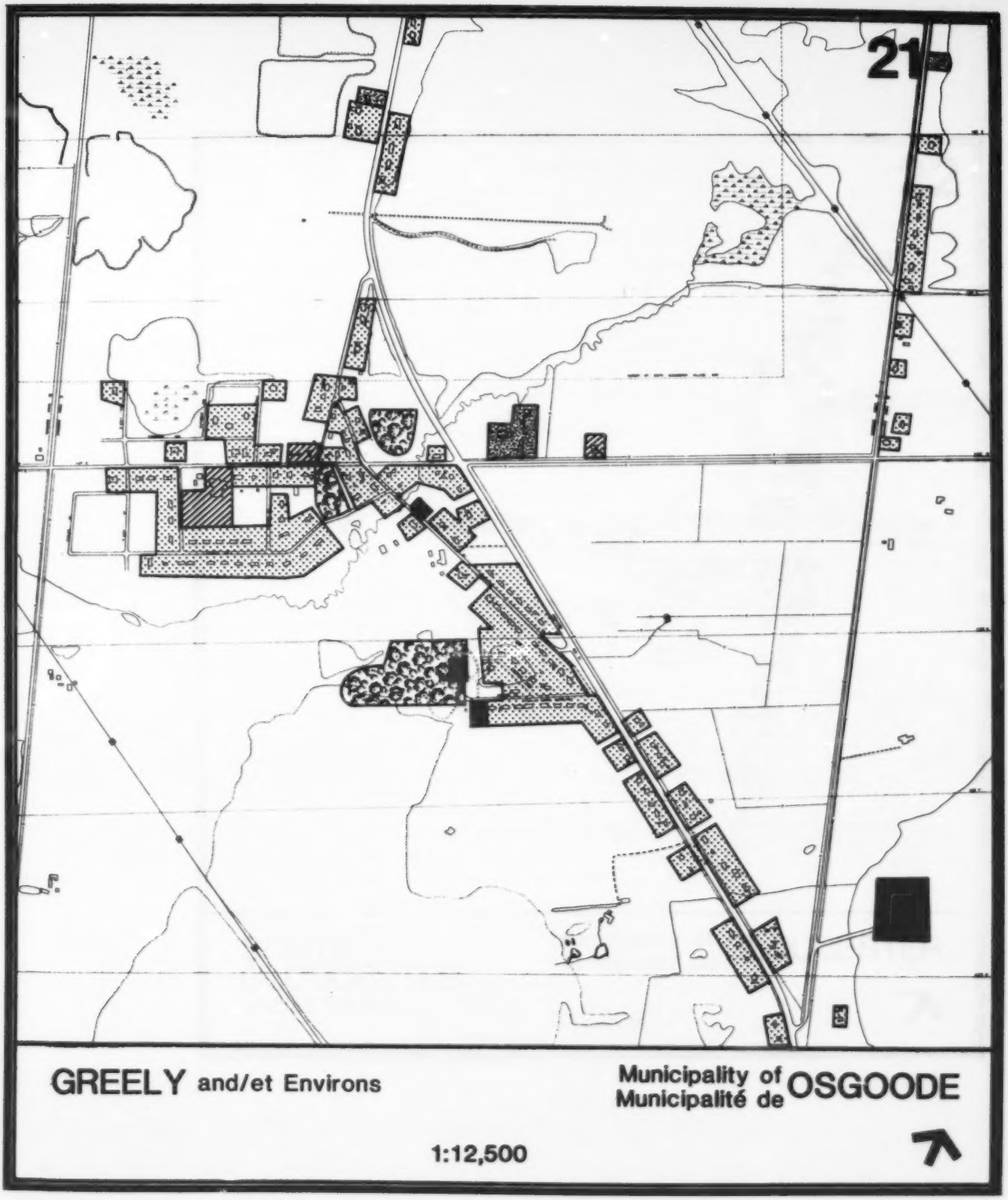
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GREELY and/et Environs
Municipality of
Municipalité de OSGOODE
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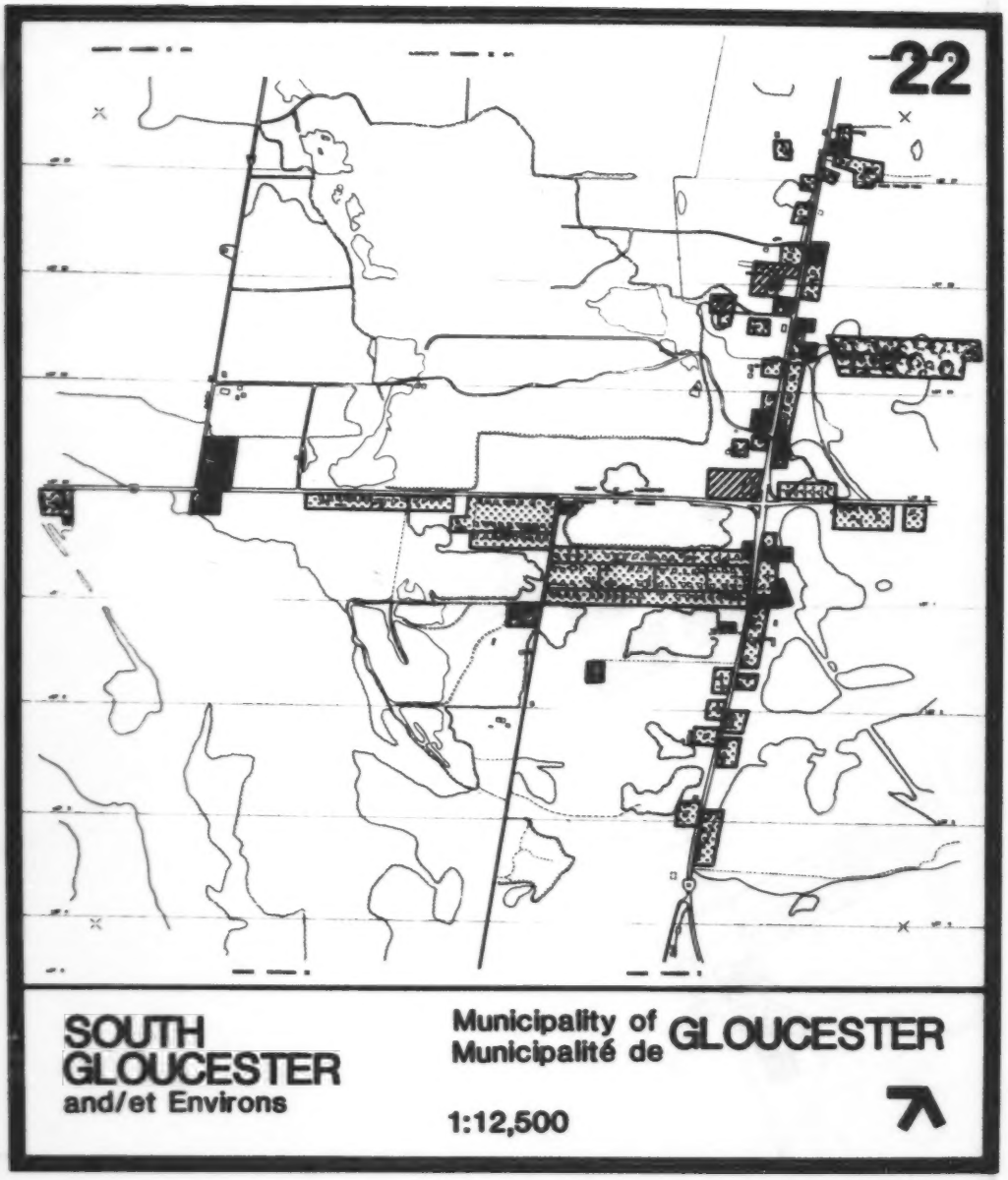


SOUTH GLOUCESTER
and/et Environs

Municipality of GLOUCESTER
Municipalité de

1:12,500

LEITRIM and/et Environs

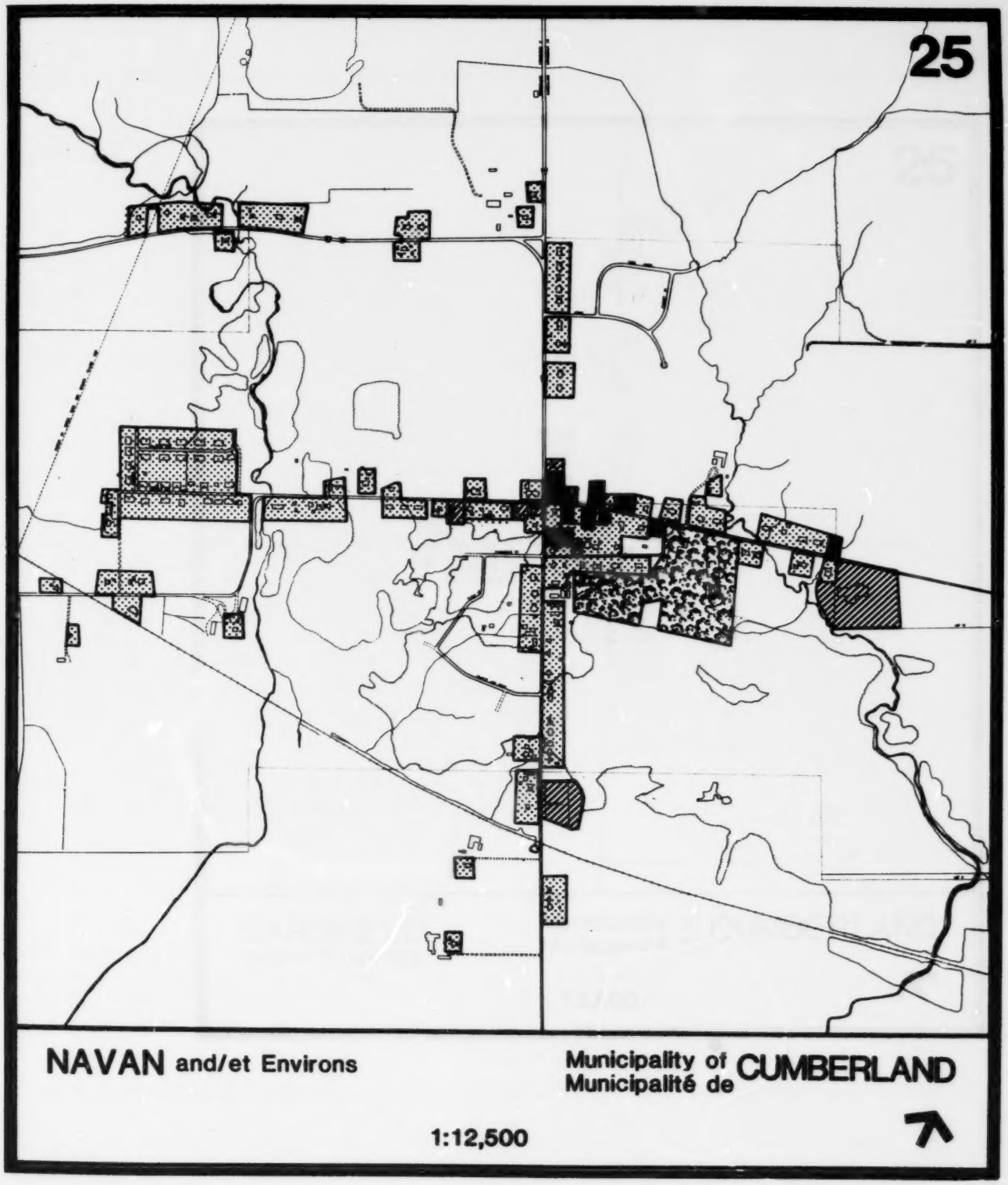
Municipality of
Municipalité de **GLOUCESTER**

1:12,500

NOTRE DAME
DES CHAMPS
and/et Environs
1:12,500
Municipality of
Municipalité de
GLOUCESTER
& CUMBERLAND
24

DES CHAMPS
NOTRE DAME

& CAMBERWELL
GROVE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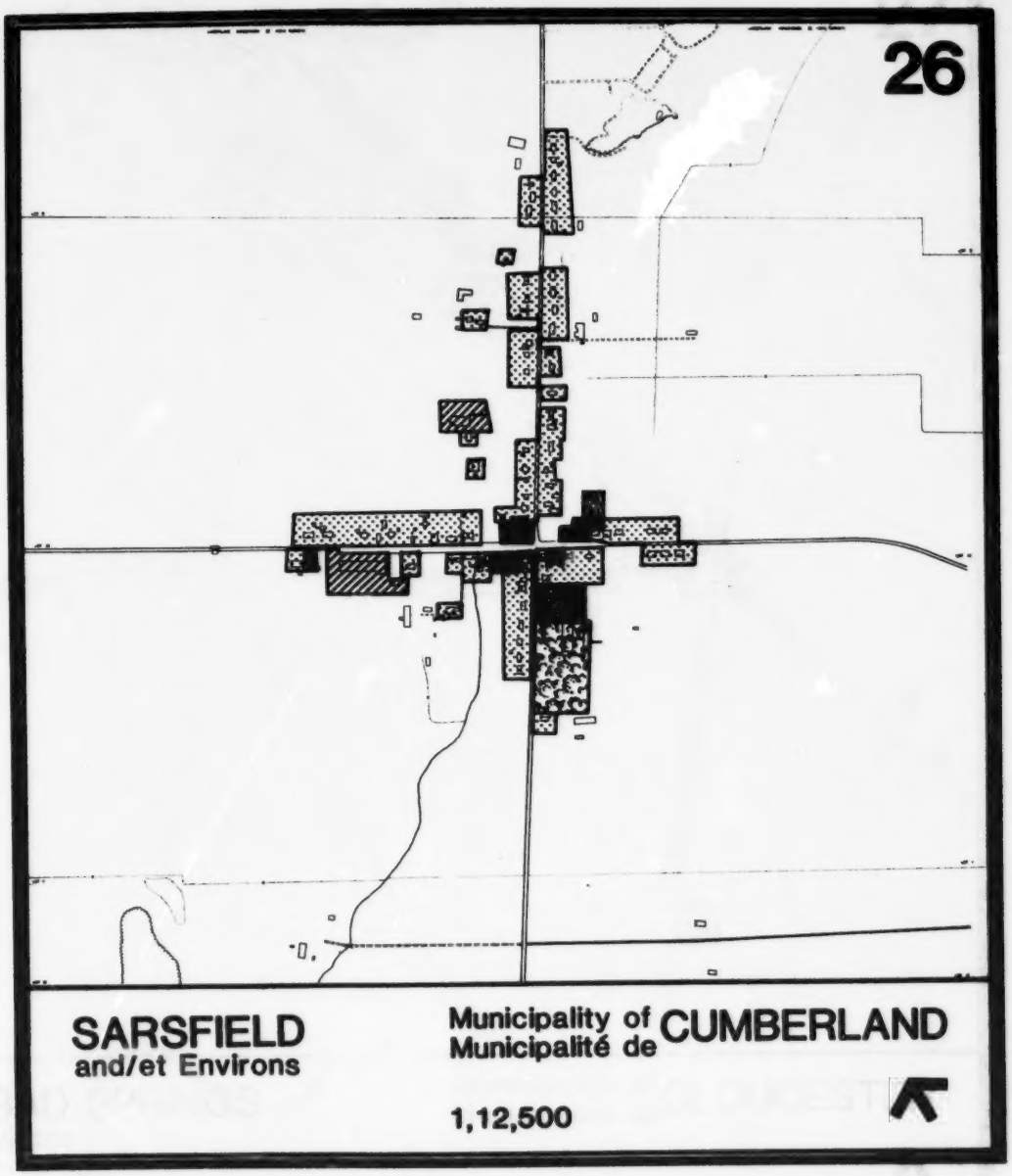
NAVAN and/et Environs
Municipality of
Municipalité de CUMBERLAND
1:12,500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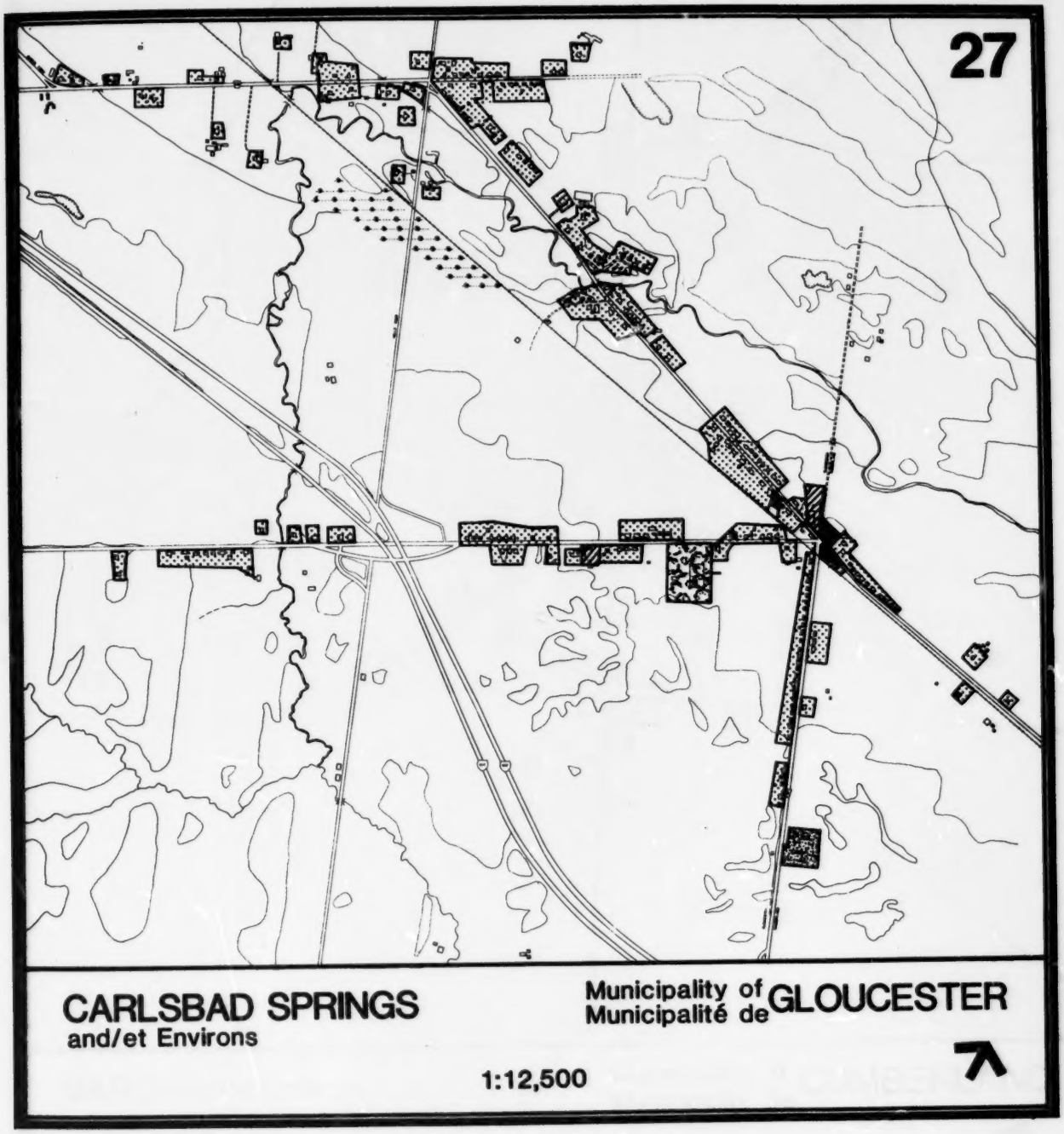
SARSFIELD
and/et Environs
Municipality of
Municipalité de
CUMBERLAND
1,12,500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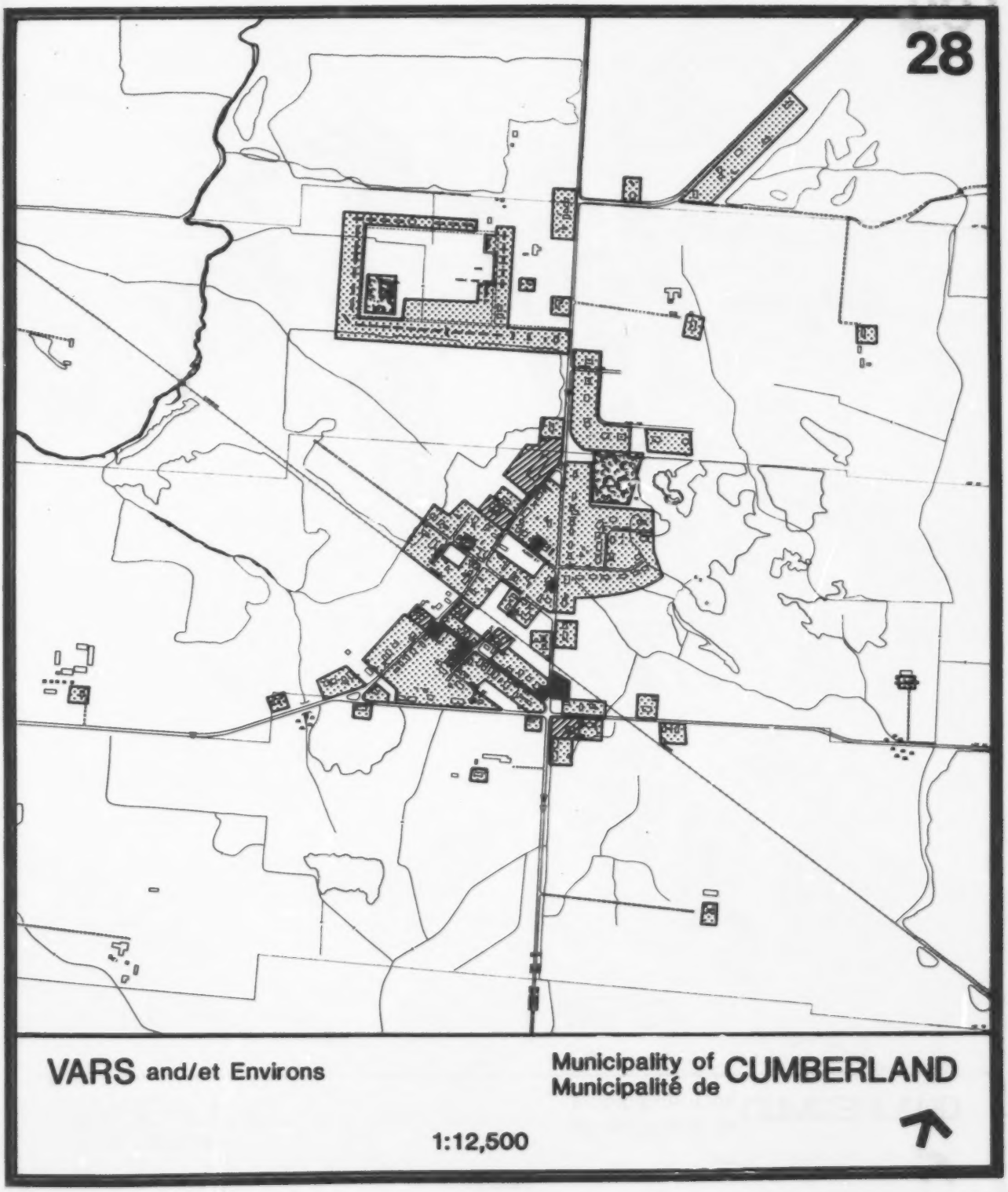
CARLSBAD SPRINGS
and/et Environs
Municipality of
Municipalité de
GLOUCESTER
1:12,500


28
VARS and/et Environs
Municipality of
Municipalité de CUMBERLAND
1:12,500

CUMBERLAND
and/et Environs

Municipality of
Municipalité de CUMBERLAND

1:12,500